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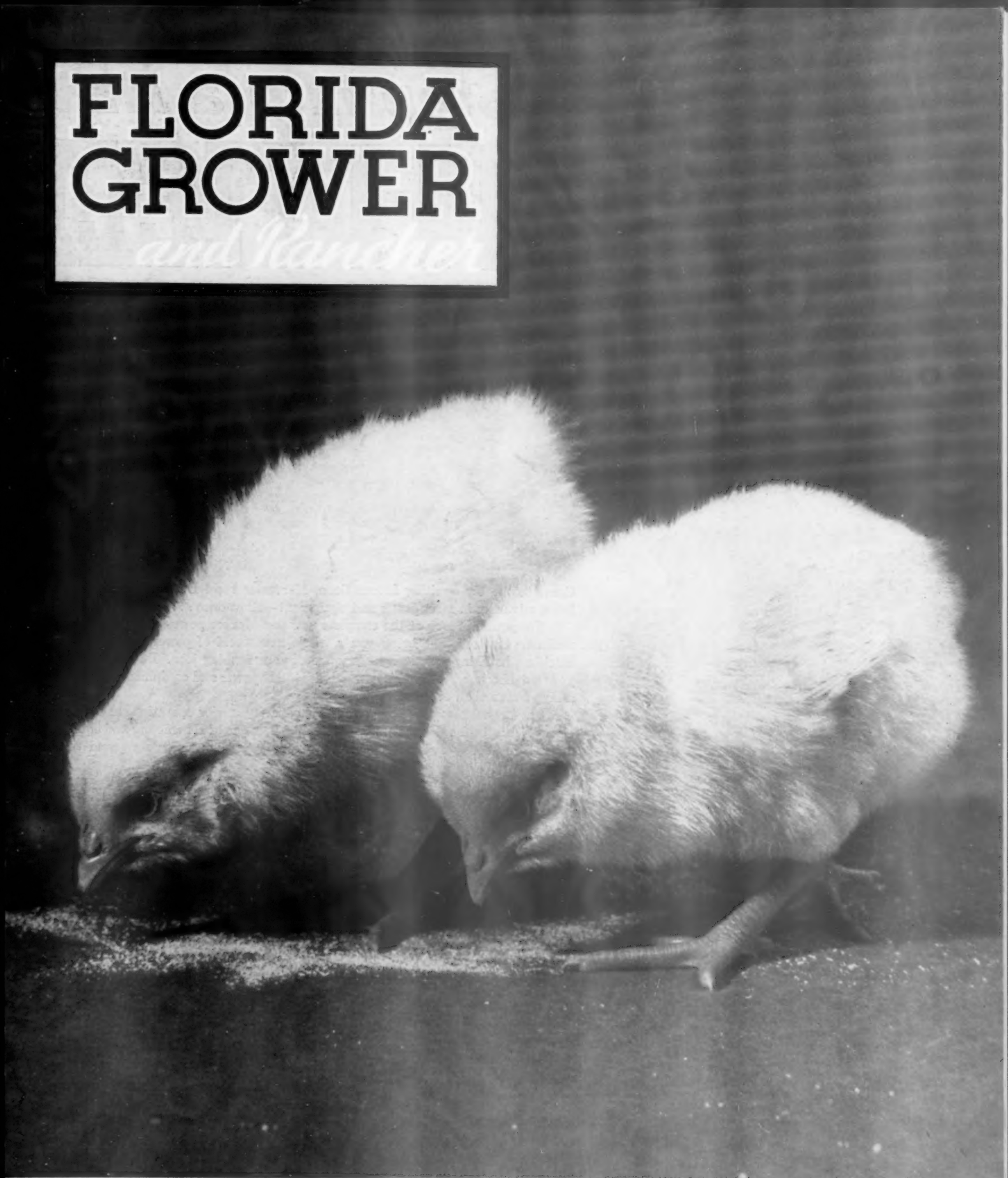

Forecasting Tomato Supplies

★ ★ ★

Heating Citrus Groves

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August 1958
Price 10 Cents

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Check the IH demonstration schedule listed below! Circle the date of the big field demonstration nearest you. Take this golden opportunity to see all that's new in farm equipment—all at once! Bring your whole family . . . come with a neighbor. Plan, *now*, to come and spend the day. Don't miss it!

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International Harvester Products *pay for themselves in use* — Farm Tractors and Equipment . . . Twine . . . Commercial Wheel Tractors . . . Motor Trucks . . . Construction Equipment—General Office, Chicago 1, Illinois.

NEW PUBLICATIONS

New publications listed below may be obtained, free of charge, by writing the University of Florida Agricultural Extension Service, Gainesville.

Requests should cite the circular number and name.

C. 177, "External Parasites of Poultry" discusses the control of lice, mites, ticks and fleas.

C. 178, "Growing Bananas in Florida," a complete discussion of all factors in raising bananas successfully.

C. 179, "Let's Grow a 4-H Garden," a well-illustrated booklet on preparing and growing a garden for first and second year 4-H gardeners.

C. 180, "Using Florida Fruit—Limes" contains suggestions and recipes for using limes.

C. 181, "Lawn Pest Control Guides," concise listing of lawn pests, their description, history, injury and control.

C. 182, "Garden Chrysanthemums".

C. 183, "Growing Red Cedar in Florida," a complete guide to growing red cedar from seed.

C. 184, "Testing Oranges for Processing" describes what every grower should know. Discusses selling cannery fruit in terms of boxes or juice-pounds solids.

C. 185, "Selecting a Grove Site," a handy discussion of factors to consider in grove site selections.

COMING EVENTS

Aug. 7: West Florida Dairy Show, Chipley
Aug. 11-15: Florida Citrus Institute, Camp McQuarrie.
Aug. 18-23: Florida Poultry Institute, Camp McQuarrie.
Aug. 19: Florida Cattlemen's Institute, Camp Cloverleaf.
Aug. 19-22: 4-H Cooperative Activities Institute, Camp Cloverleaf.
Aug. 21: Jersey Cattle Club Sale, Jacksonville.
Aug. 31-Sept. 1: Immokalee Saddle Club Championship Rodeo, Immokalee.
Sept. 6: Youth Hereford Sale, Alachua.
Sept. 18: Florida Holstein Sale, Bartow.

The Cover . . .

Our cover this month represents one of the large segments of Florida's fast-growing poultry industry—the hatchery division. Without hatchery chicks, there would be no fresh eggs for the people of the Sunshine State.

The two small chicks are Kimberchix cockerels. They were loaned to us by Bloomingdale Poultry Farm, Valrico, for the purpose of making the photo on the cover.

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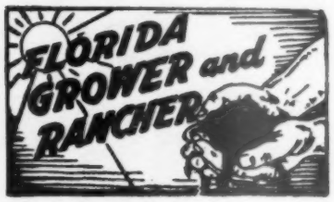
Anger is the wind which blows out the lamps of the mind.

How smart are YOU?

1. What is a *solar* day?
2. Are land or tree animals more common in a tropical forest?
3. Does the live oyster move about in the water?
4. What is *heliolatry*?
5. In what country does the greatest rainfall occur?
6. What is the difference between a share of stock and a bond?
7. Could a woman become president of the U. S.?
8. By what name are *actinic* rays better known?
9. What, literally, is the meaning of *soviet*?
10. How should a horseshoe be hung?

(Answers on Page 34)



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THE FOUR POINTS TO CONSIDER WHEN YOU BUY YOUR DEEP WELL PUMP

1 2 3 4

Long Life
Probably no other pump boasts of better operating records than Peerless. And the word of these records spreads. Result: Peerless is *first* in sales because it's *first* in dependability over the years. Look to the leader, look to Peerless for *long life*.

Maintained Efficiency
Good design, good construction, good materials mean a good long life to operating parts. That keeps up efficiency and efficiency means the most water for the least money. Look to the leader, look to Peerless for *maintained efficiency*.

Engineering Design
Your Peerless distributor can point out a score of Peerless design features to you like the Peerless Double Seal, for example. They all are there to provide your good well with the best pump. Also there are 4 deep well designs to choose from, deep well turbines, Champions, Hi-Lifts and Submersibles. Look to the leader, look to Peerless for *the best in design*.

Super Service
Here's an example of Peerless service. Properly scheduled, we can pull, repair and replace your pump in 3 days if service is required. All Peerless distributors and branch office engineering personnel are factory trained. Look to the leader, look to Peerless for *superior pump service*.

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Johnson Succeeds Carleton As Plymouth Co-Op Manager

STEPPING DOWN after 33 years in that position, R. T. (Bob) Carleton has resigned as general manager of Plymouth Citrus Growers Association.

Armer C. Johnson of Mount Dora, assistant general manager for the past 10 years, has succeeded Carleton. The latter will continue as association president and chairman of the board.

Johnson has been an association member since 1928 and vice president since 1944. He is also a member of the board and executive committee of Plymouth Citrus Products Cooperative, of the Florida Citrus Exchange's operating committee, and of Florida Citrus Mutual's advisory committee.

Armer C. Johnson

Carleton said he resigned to make room for a younger man and to devote more time to personal interests. Board members cited his long service to the association as one of the major contributions to the successful growth of the grower organization.

When Carleton became general manager in 1925, the grower group consisted of 40 members with a total production of 89,000 boxes of citrus during the 1925-26 season. Today the association lists 245 members representing 7,000 acres of citrus groves with an estimated 1.5 million boxes each season.

Active in the affairs of Florida Citrus Exchange for many years, Carleton is known throughout the industry as a quality fruit advocate. He has been consistently linked with progressive moves for the benefit of the entire industry.

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TOP YIELD!
LOW COST!
MOST PROFIT!

use "NA-CHURS" LIQUID FERTILIZER

Follow the lead of these Florida farmers and growers who have proven to themselves that "Na-Churs" can help increase profit!

"I RECOMMEND IT VERY HIGHLY"

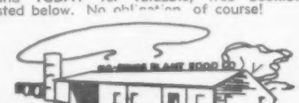
Eston Strickland of Arrington-Crum & Strickland, Kissimmee, writes: "I feel 'Na-Churs' has helped my crops. It first helped to resist cold and it kept my plants growing during the adverse weather. I owe my good plants and earnings to 'Na-Churs' help on my seed beds.
"This is my second year on the use of 'Na-Churs' and I like it better than anything I've used to bring plants along fast and economically.
"My plants had fine root systems and good solid stalks. I will use it from now on on both tobacco and tomato plants. I recommend it very highly and no farmer should pass it up in his fertilization program.
"I've never been so pleased with any fertilizer I've used. It's good."

"I AM SOLD ON 'NA-CHURS' "

Broward N. Parsons of LaBelle writes: "I used your 'Na-Churs' 10-20-10 Liquid Fertilizer as a foliage spray on my watermelons this spring and I want to say that I am very highly pleased with the apparent results I got. The recovery of the vines after a setback was wonderful and the average size I am sure was increased very materially. I grew Charleston Grey and have been told that the melons from my field were of exceptionally high quality in appearance and flavor as well as shape.
"I am sold on 'Na-Churs' and plan to use it in the future in my farming operations. I recommend it very highly."

Try "NA-CHURS" Now and Prove to Yourself That It Can Help Increase Profit!

"Na-Churs" Crop Service Representatives have the training and the field experience you need to help solve your fertilizing problems. Let "Na-Churs" help plan your fertilizer program for MAXIMUM PROFIT potential! Send TODAY for valuable, free booklets listed below. No obligation, of course!



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CITY .....

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this John BEAN SPRAYER . . .

is BUILT IN FLORIDA with
all the features
FLORIDA GROWERS WANT

RUGGED HIGH PRESSURE PUMP—Fully enclosed and oil-bath lubricated, John Bean's Royal Triplex pump has Sapphite ceramic cylinders that last a life time, even with concentrates. Cylinders are diamond-honed for minimum wear on plunger cups. 20 to 60 GPM models — 600 to 800 lbs. pressure. Thorough spray coverage; fast, 90 GPM or better tank refills.

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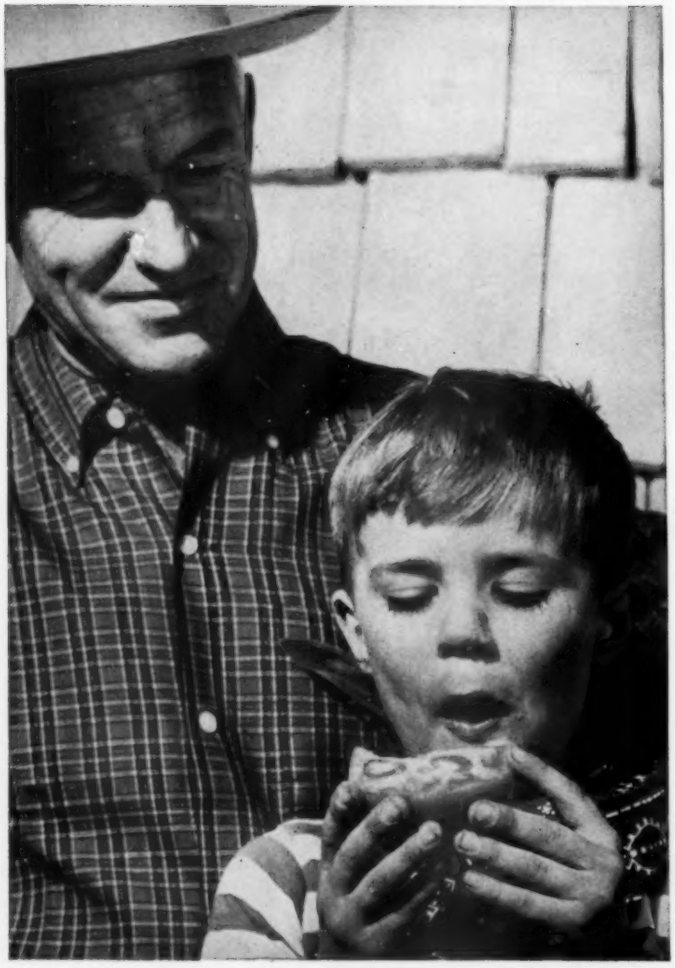

Protect your crops against mites and aphids with amazing new Trithion®

Tomatoes like this bring you top prices. During the growing season Trithion protects them against destructive pests up to 4 times longer. Cost? Actually less than most insecticide-miticides—because it lasts longer, needs fewer sprayings. Use Trithion to earn more money on a whole range of crops. Ornamentals, vegetables, fruits, cotton, many others. Growers find it a powerful new weapon against aphids, mites and mite eggs (104 pests in all). Trithion is easy to use, leaves no off-flavor. Plan now to cash bigger crop checks this season. Ask your dealer for Trithion today.

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Florida Poultry Institute Program

COMPLETE and comprehensive will be the program of the 17th annual Florida Poultry Institute, August 18-23.

The institute will be held at Camp McQuarrie, two miles west of Astor Park in the Ocala National Forest. (Reservations for free lodgings should be sent to N. R. Mehrhof, Poultry Husbandman, University of Florida, Gainesville.)

Overnight guests should bring their own bed linens and toilet articles. Meals will be served at the camp at a nominal cost.

Registration will begin at 2:30 P.M. on Monday, August 18. Daily sessions will be held Tuesday through Friday from 8:45 A.M. until noon, and from 1:45 to 4:30 P.M.

Program topics and the speakers are listed below:

Tuesday Morning

"Where Is This Florida Poultry Business Heading?", J. S. Moore.
"What It Takes to Make a Complete Poultry Feed," Dr. Robert H. Harms.
"Bulk Handling of Feed," W. N. Kluberg.
"What the Poultryman Should Consider in Purchasing Chicks," Richard C. Newman.
"Feeding Replacement Pullets," Dr. P. R. Record.
"Growing Healthy Pullets," a panel discussion moderated by A. W. O'Steen: "Housing and Equipment for Growing Pullets," William Kloeppel; "Vaccination, Medication and Worming Program," I. R. Northrup; "Growing Pullets for Cage Layers (Range Method)", Don Turman; "Growing Pullets for Sale (Confinement Method)", Ray Arthur.

Tuesday Afternoon

"Contract Farming as It Relates to the Poultry Business," Dr. Ralph A. Eastwood.
"What About C.R.D.?", Dr. M. W. Emmel.
"Coccidiosis — Vaccination and Medication," Dr. S. A. Edgar.
Special meeting, Florida Turkey Association board of directors.

Wednesday Morning

"Feed Consumption and Feed Efficiency for Layers," George Williams.
"Control Those Internal Parasites," Dr. Emmel.
"Florida Research in Poultry Nutrition," Dr. Harms.
"Feeding Layers," Dr. Record.
"Layer Management," panel discussion moderated by N. R. Mehrhof: "An Overall Layer Management Program," John Scussell; "Housing and Equipment for Layers," Steve Voscinar; "Lights, Lighting and Feeding the Layers," Frank See; "Cost and Replacement Program with the Layers," Kenneth Overcash.

Wednesday Afternoon

"The Poultry Industry of Tomorrow," K. K. Heideman.
"The Egg Production Picture in Georgia," H. W. Bennett.
"Observations on Egg Marketing Around the State," Guyton Williams.
"Egg Marketing," a panel discussion: "The Use of an Egg Vending Machine in Marketing Eggs," R. J. McKelvey; "Marketing Eggs to the Consumer," Ephrian Adkins; "Marketing Eggs to the Retail Store," Billy Gibson; "Marketing Through a Cooperative," Jim Littman; "Marketing Eggs Wholesale," Ray Starnes.
Special Meeting, Florida State Poultry Producers Association board of directors.

Thursday Morning

"Bibliography of a Good Egg," Fred R. Tarver Jr.
"Measuring Egg Quality, Present and Future," W. E. Hauver Jr.
"Inherited Traits Affecting the Quality of Albumen," Mr. Newman.
"What's New in Controlling External Parasites," Dr. Edgar.
"Business Management," Dr. C. C. Moxley.
"Florida Egg Commission Report," Carl Binger.
"Florida Egg Co-op Study," Ed Horton.

Thursday Afternoon

"Brain Storming," Dr. Frank Goodwin.
Florida Egg Commission meeting.

Friday Morning

"Florida Chick Production and Export," W. E. VanLandingham Jr.
"Progress Report of the Random Sample Test," Mr. O'Steen: "Progress Report on Egg Quality Study, Random Test," Mr. Tarver.
"The Hatcheryman's Responsibility to the Chick Purchasers," Mr. Bennett.
"Federal-State Poultry Production Reports," Gene Rowe.
"Mandatory Inspection," Thomas J. Mullin.
"Commercial Broiler Operation," panel discussion moderated by L. W. Kalch: "Chicks," Fred Coats; "Feed," Phil Freeman; "Service for the Broiler Grower," Silas Little.

Friday Afternoon

"Methods of Random Test Reporting," Mr. Mehrhof.
Annual meeting, Florida Hatchery and Breeders Association.

* * *

Farmers Can Get Gasoline Refunds

SIX CENTS per gallon refunds on gasoline used on the farm are available to farmers.

However, this refund total comes from two different sources. Dr. C. C. Moxley, Agricultural Extension Service associate economist, explains:

First is the four-cent per gallon *state* tax, refunded only to farmers with permits. These are issued on an annual basis by the State Comptroller, Tallahassee.

Issued with the state permit is a book of invoices, in which the farmers keep signed records of gasoline purchases. At the end of the calendar year, the farmer files a refund claim on the number of gallons itemized on his invoices.

Persons who expect to receive state gasoline tax refunds should obtain a permit immediately, Dr. Moxley suggests.

No permit beforehand is needed for the two-cents per gallon gasoline *federal* tax refund. The procedure is simple:

At the end of the fiscal year, the farmer submits his claim on U. S. Treasury Form 2240. These forms are available from Internal Revenue offices, county agents, banks and post offices.

Tax refunds are allowed if the gasoline is used for cultivation, crop production, and forestry operation as related to farming.

Other uses for which refunds are allowed are handling, drying packing, grading and storing unmanufactured commodities when the farmer produces more than half the commodity so treated.

Refunds are permissible also on diesel fuel and special motor fuels.

Additional information on tax refunds for on-farm used gasoline may be obtained from the county agent's office.

The Meadow Nematode — New Menace to Peanuts

UNTIL RECENTLY, nematodes haven't been considered a threat to peanuts. And it's true that the root-knot nematode is no such problem in most places.

But, research now shows, peanuts are often heavily damaged by meadow nematodes. This finding suggests that we need to improve our agronomic practices, especially where peanuts are rotated with other highly susceptible crops.

Nematode damage to cotton, corn and tobacco is primarily on the roots. Consequently the meadow nematodes had been overlooked because these pests center their feedings on the fruiting pegs and shells of the peanut plant.

This important habit of meadow nematodes has just been discovered in cooperative studies by USDA and the Georgia Agricultural Experiment Station. Georgia pathologist L. W. Boyle started the studies some years ago.

Carried By Shells

He showed that the meadow nematode (*Pratylenchus brachyurus*) can be carried into non-infected soil on the shells of infested peanuts. Shelled seeds, however, did not infect the soil since the pest does not enter the kernels.

By fumigating infected soil, Boyce reduced harvest leavings in the soil by 20 to 50%. He concluded that the infections cause many nuts to be left in the soil at harvest and that the leavings, in turn, build up infection in the soil.

More recent studies by ARS nematologist J. M. Good fortified this belief. In a field at the Coastal Plain substation (Tifton, Georgia) where many peanuts had been left by the harvester two years before, there were large patches of chlorotic plants in the current peanut crop.

Good found many nematode lesions on the pods in those patches. (Nematode lesions are dark to purplish brown areas with a distinct margin, in contrast to lighter colored rot lesions that blend into the background of healthy tissues.)

Adults, larvae and eggs of the nematode were in those dark lesions —frequently several hundred adults in a single lesion. In fact, gram for gram, lesion-marked pods had six times as many nematodes as the roots of the same plants or the pods of plants from healthy areas.

In another study, there were eight times as many nematodes on pods as on roots.

Experiment Findings

Good proceeded to prove that the nematode is capable of remaining alive in shells after harvest, even after the customary drying of the nuts to 10% moisture. He also proved that the nematodes in shells of peanuts left in the ground after harvest can infect the next crop:

First, he fumigated potting soil to kill the nematode. Then he planted 15 nematode-infected peanuts in each of certain pots. The pots were left outdoors all winter.

During the following summer, heavy nematode infestations showed up on peanuts and corn grown in the pots thus inoculated with the pest. Plants grown on the fumigated soil without buried nuts remained nematode free.

Row-fumigation of the field plots before planting reduced nematode counts by 93 to 98% in one study. However more farm trials will be needed to learn whether it may pay to fumigate rows for planting or to sidedress with nematocides as blooming starts.

Better Practices

If peanuts are harvested early and a clean job of harvesting is done, most of the pests in shells will be removed. In that case, there is no objection to keeping the peanuts in rotation along with the even-more-susceptible cotton, corn and tobacco.

We should definitely avoid planting whole pods (in areas where that is still the practice) in order to minimize the spread of this nematode.

Peanut shells have come into extensive use for garden mulches and fertilizer extenders near peanut crushers. We now know these practices build up the numbers of this pest.

Contrary to popular belief, the meadow nematode *can* cause great damage to southern crops and gardens.

Trapping Starts For Mexican Fly

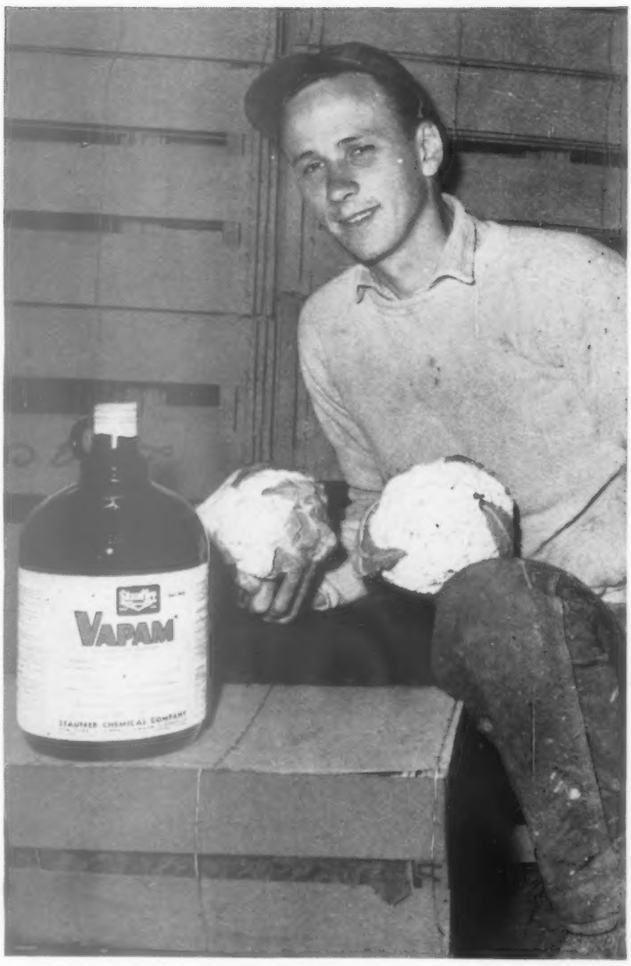
This month the State Plant Board will begin trapping in earnest for the Mexican fruit fly.

Following the 1956 Mediterranean fruit fly outbreak—with its serious threat to citrus and vegetable crops—the plant board decided on a constant survey for all principal species of fruit flies.

Presently, the Medfly is still under control. Nevertheless, the board is still trapping for it.

Also out are some traps which attract the melon fruit fly, the Oriental fruit fly, and the Natal fruit fly.

If you're keeping your tractor fuel in a red, unshaded tank, you're probably losing about three out of every 100 gallons by evaporation. A white, shaded tank with pressure-vent cap will cut evaporation to almost nothing.



"I saved weeding...grew my best crops in soil treated with Vapam®"

—Perry Conklin, Aquebogue, N. Y.

Vapam is such a good soil fumigant Perry Conklin plans to use it again next year in all of his cauliflower beds. He says: "Vapam just about got rid of all weeds in the areas we treated. This saved us time and money. Blackleg disease was a problem before, but not afterwards. Plants I grew in treated soil were well-rooted and vigorous." Mr. Conklin and his father, a 32-year veteran of farming, used no special equipment. They simply drenched the soil with Vapam. You, too, will find it easy and profitable to control weeds, nematodes, club root and other soil pests with Vapam. Ask your dealer when and how to apply it.

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NEW ONE-SPRAY WAY to control bacterial and fungal diseases!

Agri-mycin 500 is a new anti-bacterial, anti-fungal spray that gives your fruit double protection with one spraying!

Experiment stations report getting over 200% greater yields of unblemished, premium-size fruit with Agri-mycin 500 than from diseased check plots! Better size fruit, less cracking and scarring!

bacterial spot, early blight, late blight, septoria leaf spot, anthracnose and leaf mold . . .

bacterial spot, anthracnose and leaf mold . . .

bacterial blight, late blight, early blight and leaf spot diseases . . .

Agri-mycin® 500*
Pfizer
ANTIBIOTIC COPPER SPRAY POWDER
for Control of Certain Plant Diseases
Active Ingredients
Streptomycin 1.76%
Copper (in Basic Copper Sulfate) expressed as metallic 42.40%
Oxytetracycline† 0.18%
Total Inert Ingredients 55.66%
Agricultural Sales Division
CHAS. PFIZER & CO., INC.
Brooklyn 6, New York
Agri-mycin 500

Agri-mycin 500 is a new exclusive patented combination of Terramycin®, streptomycin and basic copper sulfate. This combination exerts a synergistic action to give you *increased disease control* over *both* bacterial and fungal diseases!

Controlled field experiments show Agri-mycin 500 gives better control of more diseases than either antibiotics or copper used alone. For example, in tests Agri-mycin gave 93% disease control where a combination of two plain streptomycin products gave 66% control. In another test, Agri-mycin was 100% effective where streptomycin products alone showed as low as 38% disease control!

This better disease control has resulted in over 200% increase in yields over diseased check plots.

Unlike ordinary fungicide sprays and dusts that merely try to fight internal infections from the outside, Agri-mycin 500 is absorbed through cell walls. It fights disease inside plant tissues, where they start, as well as on the surface of your plants!

Get the full yield potential of your fields this fall and spring. Protect your plants and fruit against the diseases listed in the box above, with Agri-mycin 500—the new one-spray way to control bacterial *and* fungal diseases!

Agri-mycin 500 and Agri-mycin 100 are now available from these Florida dealers:

Florida Agricultural Supply
Hector Supply
Kilgore Feed Co.

For growers who do not need the added protection of a copper sulfate, Agri-mycin 100—the first successful control for bacterial diseases of vegetables—is also available.

Pfizer

Chas. Pfizer & Co., Inc.
Brooklyn 6, N.Y.
World's largest producer of antibiotics

Agri-mycin® 500*

*U.S. PAT. NO. 2,777,791
†TERRAMYCIN BRAND OF OXYTETRACYCLINE

NEW!

Best seed
Best pack
Best growing ever!

It's Ferry-Morse conditioned seed in the revolutionary new aluminum foil package!

Outside, a Ferry-Morse *first*—a unique new overwrapped package that keeps seed fresh longer! And *inside*, seed that has its moisture content scientifically controlled for longer life to give you *more seed per pound!*

Ferry-Morse *conditions* seed for lasting freshness. Because excess heat and moisture are injurious to seed, Ferry-Morse scientifically dries it to just the right moisture content . . . then seals the seed in air-tight, foil-wrapped packages.

The aluminum foil package assures you of fresh planting stock . . . sealed away from moisture, insulated from heat, safer from rodents and vermin. Seed stays fresh even from one season to the next!

For dependable, better seed . . . plus the extra seed per pound that scientific drying makes possible . . . ask for Ferry-Morse Conditioned Seed in the protective foil package.

LET THE GOOD EARTH PRODUCE

FERRY MORSE SEED CO.

Detroit, Mich. • Mountain View and Los Angeles, Calif.
Memphis, Tenn. • Harlingen, Texas • Tampa, Fla.

PROVED!

Seeds of a special Ferry-Morse Tomato strain—Enlarged photo.

Ferry-Morse conditioned seed in cans gives higher yields for grower-shippers

Higher yields of premium crops—that's what grower-shippers get with Ferry-Morse conditioned seed in cans! Scientific seed conditioning protects seed life. Can pack gives complete protection from moisture, dust, bacteria, and vermin.

Get higher yields! Insist on Ferry-Morse selected grower-shipper strains in one-pound cans!

FERRY LET THE GOOD EARTH PRODUCE MORSE
SEED CO.

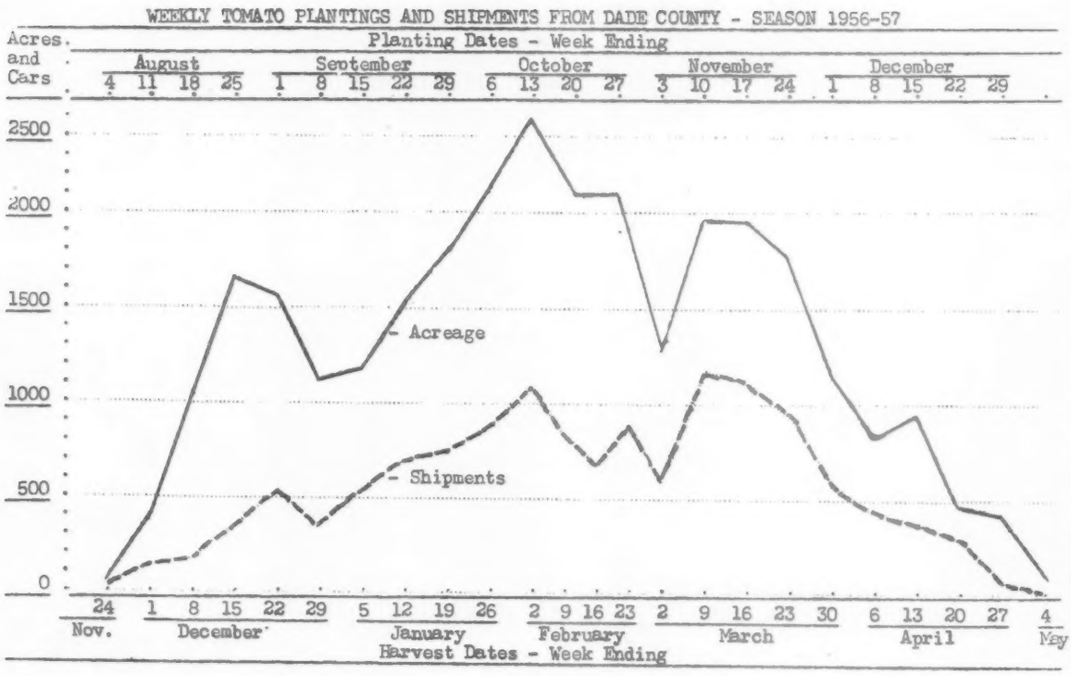
Detroit, Mich. • Mountain View and Los Angeles, Calif.
Memphis, Tenn. • Harlingen, Texas • Tampa, Fla.

Controlled moisture content!

To give you longer seed life—and more seeds per pound!—Ferry-Morse dries seed scientifically to just the right moisture content. Airtight cans seal in freshness, seal out moisture.

Tailor-made varieties!

Ferry-Morse scientific plant breeding develops grower-shipper strains specially suited to local growing conditions. Your F-M dealer will help you select the best variety for your need.


WEEKLY TOMATO PLANTINGS AND SHIPMENTS FROM DADE COUNTY - SEASON 1956-57
Acres and Cars
Planting Dates - Week Ending
August
September
October
November
December
4 11 18 25 1 8 15 22 29 6 13 20 27 3 10 17 24 1 8 15 22 29
2500
2000
1500
1000
500
0
Acreage
Shipments
24 1 8 15 22 29 5 12 19 26 2 9 16 23 2 9 16 23 30 6 13 20 27 4
Nov. December January February March April May
Harvest Dates - Week Ending

Forecasting Tomato Supplies

By W. E. BLACK
and J. B. OWENS*

FLORIDA tomato farmers are making rapid strides toward being able to forecast their future market supplies.

All this was begun just two years ago. At that time, the Florida Tomato Committee wisely granted $12,000—to develop and make available to growers and shippers a week-to-week record of plantings—to the Agricultural Experiment Station.

The Committee's grant was matched by $12,000 of federal money—suggesting the government, too, felt the need for making plantings information available to the industry.

Last year, the same financial arrangement was repeated. And, from all indications, it will probably be a permanent arrangement.

Much progress has been made by the Crop Reporting Board in gathering and distributing plantings information.

By Tuesday of each week, all of the previous week's plantings data are in and tallied. The data has also been mailed by then, to a long list of growers and industry representatives.

The Florida Crop Reporting office has three fieldmen who continually rub shoulders with growers and report their findings. The general idea is to keep a running tally on tomato plantings of *all* farmers rather than a selected few.

Receiving this data affords new opportunities to the tomato grower and shipper. For the first time, he has an impersonal basis for forecasting the future market supplies.

Such insight into supply prospects can bring a great deal of benefit to the industry IF, after having the information, *all* will act in concert to bring about the necessary qualitative and quantitative adjustments in the kind and amount of supplies required by the market.

We know, for example, that glutted market situations don't "just happen." Supplies merely outrun demand.

Glutted markets are costly—not only in terms of the terrific discounts necessary to clear the channels—but also in heavy spoilage losses. The farmer, in the meantime, is left with dim prospects of recovering his production costs.

Consequently, the first step in bringing about proper supply adjustments is for farmers to accurately gauge their prospective supply situation.

Having true and timely plantings records permits more accurate predictions sooner.

But a word of caution should be injected into the picture. The rate of harvest will not correspond exactly to the rate of plantings of tomatoes. This is primarily due to the fact tomatoes are not harvested in one batch as is celery or sweet corn.

Growers will normally pick the same field of mature green tomatoes two to five times. The average is about four times during a normal season.

Picking on stake or trellis supported vine-ripened tomatoes may be as many as 25 or more times.

This sequence of picking causes harvesting to lag behind plantings. This can be illustrated:

Let us assume that a farmer plants 100 acres of tomatoes per week for four consecutive weeks. Let us also assume that the crop is picked mature green at weekly intervals.

Now, suppose a 200-box crop per acre is picked as follows: first picking, 20%; second, 30%; third, 30%, and fourth picking, 20%.

What would his pattern of harvest be? To clarify our answer to this question, we have drawn up the hypothetical pattern of harvest shown on page 24.

The size of the crop harvested per week in our illustration was not as uniform as the number of acres planted. The peak in supplies occurred in the fourth week of harvest. Furthermore, the length of harvest was greater than the length of plantings.

Viewing the overall industry, predictions cannot be made as accurately as in our illustration. In addition to the time of planting, acreage, rainfall and cultural practices, one needs to know the temperatures from area to area.

Admittedly, the same accumulation of temperature is necessary to mature a given variety. However the number of days from planting to harvest will vary, depending on the mean average daily temperatures in the production area.

Plantings made during a cool spell will tend to mature at about the same time as the plantings that just preceded it.

Just because a field is planted two weeks after a previous field does not mean that the two crops will be harvested two weeks apart. The sequence of harvest, between successive plantings, depends primarily on temperature accumulations between plantings.

Therefore farmers should first learn the accumulative temperature or heat unit° requirements of a crop. (° Heat units are defined as the number of degrees of temperature above the temperature at which no growth occurs.) The desired interval of harvest between plantings can then be pre-determined, to a reasonably accurate degree, by allowing the proper number of heat units to lapse between each planting operation.

Farmers should also know the varietal heat unit requirements because there is considerable variation between varieties.

An idea of the effect of temperature on crop maturity may be obtained by looking at the number of days between harvest of successive plantings in different seasons of the year.

Successive plantings in the warm summer or fall months will tend to mature further apart than plantings in the winter months.

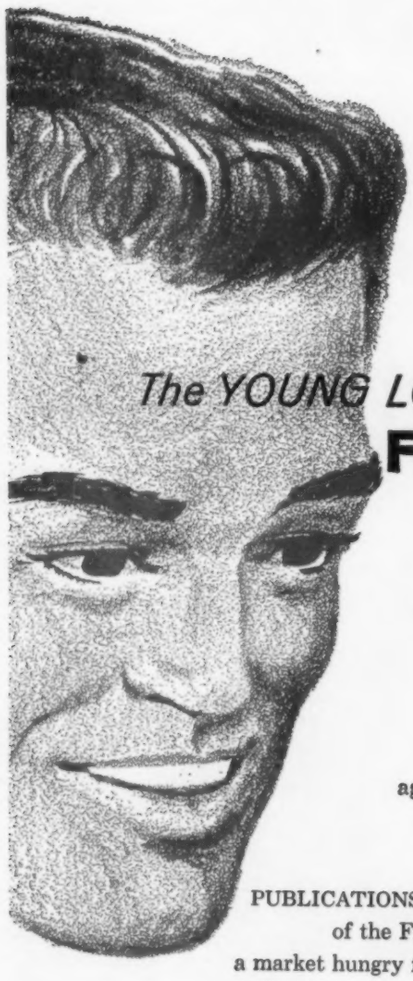
For example, let us say two crops are seeded 10 days apart in October at a time when the average units of heat accumulated per day is 30. Let us also assume the average daily heat accumulation in winter months is 10 units.

Consequently, during the winter months, these crops would be harvested 30 days apart.

But on the other hand, consecutive crops planted 10 days apart in the winter months (if the average daily heat accumulative is 10

(Continued on Page 24)

(Mr. Black is manager of the Florida Tomato Committee, Orlando; Mr. Owens, USDA Agricultural Statistician, Orlando.)



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Agricultural OUTLOOK

Hogs and Cattle A turnup in hog slaughter is in prospect; by midsummer, the rate should exceed that of last year. The larger pig crops from winter and spring farrowings will support the higher level.

Slaughter in the spring of 1959 also will run higher if the planned increase in fall farrowings materializes. Supplies in prospect do not, however, appear overly large as hog production has been declining.

Hog prices now are running at their *lightest* in several years. The seasonal drop this fall may be at least average and prices next spring considerably below last spring.

Incentives are still strong to hold back marketings for feeding or herd expansion because range and pasture conditions are excellent and prices are holding up. Slaughter will continue below 1957 levels.

For fed cattle, slaughter may run larger than last summer. But for cattle off grass, it will be down.

Eggs Spring egg production peaked late and prices at the end of May and in early June were the lowest this year. Prices are likely to strengthen in coming weeks as output declines seasonally.

The summertime rise for high-quality large eggs may be greater than in 1957, and a wider difference between large and small eggs is likely in the fall. These prospects are based upon the increased number of pullets being raised this year.

Turkeys The sharp decline in turkey hatchings through May slowed and recently hatchings have been close to a year ago. Consequently, November-December holiday slaughter will be near that of 1957.

However the year's total will fall below last year's because the earlier drop in hatchings cannot be offset.

Prices have been a little above a year ago. Likely they will run above through the holidays.

Fruit Conditions of deciduous fruit crops was indicated generally good on June 1. However some crops in California were damaged by prolonged rains at pollination time, and early-season supplies of some fruits for fresh use and processing were reduced.

Processor demands for deciduous may be stronger than last year since stocks at the beginning of the pack season may be down moderately. Consumer demand continues strong.

Tobacco Both cigarette output and use of flue-cured and burley—the main cigarette tobaccos—were higher during the 1957-58 fiscal year than in 1956-57. The gain for cigarettes is nearly 3%, bringing the total to a new high of 446 billion.

Leaf use was up by a smaller percentage because manufacturers obtained more cigarettes per pound of tobacco. Output of filter cigarettes, which take less tobacco per cigarette than those without filters, increased.

Use of processed tobacco sheet and stems also probably rose.

(EDITOR'S NOTE: The above was adapted from recent USDA Agricultural Situation bulletins.)

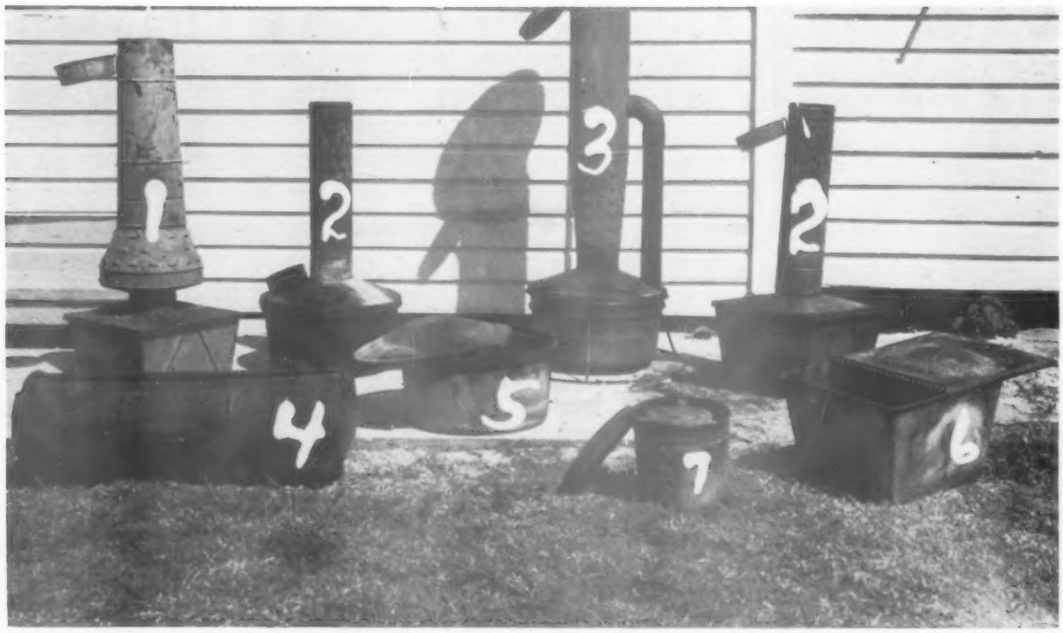
famous "Steel Squirrel" shows new model for citrus work

eliminates ladders, cuts pruning costs in half

It's self-propelled, turns on a dime, lifts and lowers by fingertip control . . . and now the Squirrel is available to citrus growers with big, fat oversize tires, optional oversize 12 h.p. motor, oversize compressed-air tank, and choice of 12, 16 or 25 cu. ft. compressor. With a Squirrel you "ride to work and make more money". You can make further savings by using air-powered tools for faster, better pruning.

GET ALL THE FACTS. Write Blackwelder Mfg. Co., P. O. Box 808, Rio Vista, California, for free folder with full details.

STEEL SQUIRREL



OIL HEATERS shown above have, with one exception which is noted, a capacity of nine gallons of fuel. They are: *1*, Jumbo Cone; *2*, Lazy Flame—*24*-inch stack; *3*, Return Stack. Sliding cover heaters are: *4*, Tank Type; *5*, Round Bowl; *6*, Square Bowl; *7*, a *10*-quart oil heater with control spider used in vegetable fields.

Grove Heating

By WARREN O. JOHNSON
Meteorologist-in-Charge
Federal-State Frost Warning Service
Lakeland, Florida

PAST WINTER seasons—particularly that of 1957-58—have made many in the citrus industry realize that if citrus is to be produced on some of the marginal lands and in more northern areas, groves are going to require protection from freezes.

Some growers have been successfully protecting their groves, even during the past winters, by the adding of heat. This was done by using oil heaters or open wood fires.

Also, there have been some installations of wind machines. Their effectiveness as a means of freeze protection has been discussed in the January 1958 issue of FLORIDA GROWER *and* RANCHER.

Use of "dirt banks" in the protecting of small citrus trees is a well established practice. However there is a definite need to find a means of preventing the "dirt banks" from being blown away from the trees by winds.

This article will discuss the practice of adding heat in protecting citrus from freeze damage. This may be rather cold reading material for the middle of the summer—but it is necessary.

Now is the time the grower should determine whether or not he should equip his groves with heaters. Grove heater manufacturers govern their production with orders on hand, and require about four months for delivery.

Proper grove heating requires planning and vigilance at all times. The equipment must always be in readiness—heaters and torches always filled; the labor, readily available.

If the practice is to be at all economically sound, heating must be practiced only when absolutely necessary. The temperature should be maintained just slightly above the critical point so that fuel is not wasted.

Admittedly, the heating operation is an expensive operation. However it pays well when it is properly done.

Money saved or realized from undamaged fruit during a single severe cold spell, it has been ascertained, will more than pay for the heating operations for a 10-year period. Moreover, when trees are protected, the expense of pruning costs is saved and the yield for the following years will not be reduced.

Unprotected trees, on the other hand, may not come back into full production for two or three years. Some may even be completely killed.

There are some groves in some sections of the state where heating is not economically sound. This is due to the fact they are located in very warm locations, generally high ground.

Freeze damage to groves in these locations is so infrequent that the cost of maintaining the equipment—for the occasional cold damage that does occur—is such that preparations for heating operations are not warranted.

By mid-November, plans for grove heating operations should have been completed so that everything is ready for any cold weather that may come:

Heaters, filled and ready for use, should have been placed in the grove; the storage tanks filled; the torches filled and ready for use.

Also, the thermometers should have been checked and installed in the shelters in the grove and outside the grove area. Arrangements (including training) should have been made for the manpower for the heating operation.

In addition, the foreman and plot foreman should be well versed in heating operations, in the reading of the thermometers, and in the regulating of the heaters.

The critical or damaging temperature of citrus varies with the condition of the trees, the period of the year, and the variety. The following facts have been ascertained:

Citrus fruit, with three exceptions, will generally withstand 28° temperature for at least two hours without damage. Tangerines, limes and lemons will be injured by temperatures of 30° for a two-hour period or longer.

Leaf growth, except tender growth, will withstand temperatures of 28° without material damage. And very little wood damage will result unless temperatures go below 24° for two hours or longer.

It can be seen from these data that if grove temperatures are maintained above 28° during heating operations, the grower is wasting fuel.

Fruit is cooled, as a rule, by the air coming into contact with it. And the temperature fall of the fruit will lag behind that of the air.

Lag in fruit temperatures will be greatest on nights with a continued rapid temperature drop following a warm day. But only a slight lag will occur on nights with a slow air temperature fall preceded by a cold day.

Air temperatures specified in the table on page 37 may be used to determine when lighting operations should be begun. The lighting of heaters should be completed within one-half hour; the air temperature should be maintained near 28° after the heaters are lighted.

During most periods of cold weather, it is generally only necessary to light one-third to one-half of the heaters in order to maintain the temperature slightly above the critical point.

Heaters should burn only at the one-half to three-fourths gallon per hour rate. If the number of heaters burning are not maintaining the temperatures above the critical point, it is better to light a few additional heaters per acre than to increase the rate of burning of the others.

On very cold nights, all of the

(Continued on Page 37)

Here's HUSKY POWER That Offers You a *TRIPLE SAVING* on Every Grove Operation

More than 48 belt horsepower, outstanding fuel and maintenance economy, custom styling for grove operations, plus every modern time- and labor-saving feature make the John Deere "620" Grove Tractor first choice of grove owners everywhere. The husky "620" is available with an engine to burn gasoline, LP-Gas, or "farm tractor fuel," as you prefer.

The Powerful JOHN DEERE "620" Grove Tractor

On every grove operation—plowing, disking, spraying, transporting, you'll enjoy a triple dollar saving with a powerful John Deere "620" Grove Tractor. You'll save first on fuel, thanks to the high efficiency of the "620" engine . . . you'll make a saving on maintenance that only the rugged two-cylinder engine design provides . . . and you'll save on labor costs through greatly increased daily work output.

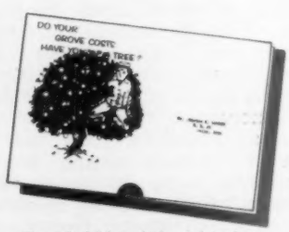
A glance shows you how well this tractor is tailored to grove work. It's compactly designed with a short wheel-base; stands only 59-1/2 inches at its highest point. This means that you can maneuver the tractor easily in tight quarters, dodge around trees with ease, and make extremely short turns at row ends. The "620" is completely shielded and has no protruding parts; you can work closer to trees without damaging the crop.

Here's a tractor that shoulders more of the work load; that enables your operators to work longer hours with less fatigue. John Deere Power Steering takes all the muscle work out of driving the tractor; "live" Powr-Trol provides effortless remote-cylinder control of equipment (helps insure better work, too); Independent Power Take-Off enables you to handle sprayers and other power-driven equipment with maximum speed and efficiency.

The "620" Grove LP-Gas Model

This "620" Grove is factory-engineered from the ground up to handle LP-Gas with top efficiency and economy.

If LP-Gas is your fuel, the John Deere "620" Grove LP model is the tractor for you. In every way, this tractor is tailored to handle LP fuels with maximum efficiency and dollar-saving economy. Note how smoothly the heavy-duty fuel tank has been streamlined into the tractor. Special LP-Gas carburetion, efficient converter, cool intake manifold, special alloy crankshaft—every feature that you need for top performance on LP-Gas is designed into the "620" Grove LP-Gas Tractor. Ask your John Deere dealer for complete details on this outstanding tractor.



This colorful broadside explains how the John Deere "620" will help you to make greater profits from your grove.

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JOHN DEERE

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ask about the JOHN DEERE CREDIT PLAN

J. Francis Cooper

Editor of Florida Agriculture

"LIKE THE *baseball pitcher, farmers must be always ready with a change of pace in production to meet the change in demands of the consumer. . . .*

"Farmers will take better care of their machinery if they remember that where sand drifts in, profits drift out. . . .

"You can't expect to be a lucky dog if you spend all your time growling. . . ."

Such pertinent and penetrating insight into their livelihood and lives has been faithfully read, and taken to heart, by thousands upon thousands of Florida farm folk during the past 33 years. Moreover, even though they haven't met him, most of his appreciative readers look upon author "Spuds" Johnson as a sage and trusted friend.

And they have trusted wisely. "Spuds" Johnson, more formally known as J. Francis Cooper, is rightfully recognized as *the* editor of Florida agriculture.

Officially, Cooper's title is "editor of the University of Florida Agricultural Experiment Stations and Agricultural Extension Service." In brief, he is in charge of obtaining, correlating and disseminating information about all phases of state-sponsored agricultural experiments and research.

His editorial staff has grown steadily since 1927 when Cooper ceased to be the "editorial department." Presently, about 50 people take part in editing, reporting and public relations for Florida's agricultural services.

"Credit for the success of this department's efforts should be given to the various staff members, not to me," Cooper modestly declares. "After all, I've only done the job I was hired to do."

In order to judge the true extent of Cooper's service to Florida agriculture, one must first realize the variety of his activities.

The printed word (i.e., editing and doing some writing of news stories) heads this list. Described briefly below are the regular contributions:

Agricultural News Service Bulletin: This is sent weekly to every communication media in the state. As its name implies, this bulletin contains capsuled items about recent research, authoritative advice on how to meet or combat current or potential agricultural pests and problems, a weekly homemaking column, "Spuds" Johnson's editorial comment, etc.

Sunshine State Agricultural Research Report: As stated on its masthead, the purpose of this slick-paper quarterly (edited by Cooper) is "to make research results available in popular form for Florida growers, ranchers, and other farmers."

Circulars: Cooper has edited and supervised the printing of every Agricultural Experiment Station and Extension Service bulletin and circular printed since February 1, 1925. But far from being in the "circulars" category is his most ambitious single editing project to date—a 200-page book written by Experiment Station personnel.

Liberally illustrated with four-color photographs, the book is a comprehensive "Florida Guide to Citrus Insects, Diseases and Nutritional Disorders." Just off the press it retails for $4.

It goes without saying that Cooper has edited almost every article in the above-mentioned publications. What may not be so well known is the fact that he has also written quite a few of these articles.

"Very conservatively," he meditates, "I would estimate that I have written a minimum of 200 releases per year for 33 years."

But the above still doesn't tell the whole story:

Despite his extremely crowded schedule, Cooper is ever willing to write specially-requested news or feature stories for any or all of the state farm journals. He has been a very good friend to FLORIDA GROWER *and* RANCHER in this respect.

The first Florida Farm Hour was produced by Cooper over WRUF, the University of Florida radio station, in 1928. And it has been presented over WRUF every weekday and Saturday since then.

Similar programs are broadcast over 52 other Florida radio stations each week. Much or most of the material used comes from the Experiment Station's editorial office.

During the past five years, this service has been expanded to include—first live and then filmed—television programs. These go to stations in Miami, Jacksonville, Orlando, Tallahassee, Daytona Beach and Tampa.

"Extra-curricular" activities include addressing agricultural journalism and "ag" classes. He also helped initiate and carry out a program of training county home demonstration agents and other State Extension Service personnel in public relations.

Cooper can usually be found in his big, but crowded, office. And he is usually found busily attacking his typewriter, the first two fingers of each hand going at machine-gun speed.

He is rather reserved, especially at first. But the black hornrimmed glasses, which he wears when he "thinks" on the typewriter, quickly come off as he welcomes a visitor.

Stockily-built, Cooper is a pleasant-faced man with thinning sandy-gray hair and a keen, straight glance. Strangely appropriate is his soft Alabama twang, an ever-present reminder of the Tuscaloosa County farm where he was born.

Talking to a visitor, he reaches almost automatically for a well-worn pipe from the collection on his desk. He works at the pipe constantly while he talks.

Closely watching the person with whom he talks, as though reading more than words, he rarely smiles or shows what he thinks. And his dry, matter-of-fact tones seldom change throughout a conversation.

Young Francis Cooper graduated from Alabama Polytechnic Institute (at Auburn) in 1921 with a major in animal husbandry. However a senior-year course in agricultural journalism—during which he and six fellow students published a quarterly called *The Alabama Farmer* and wrote a monthly page for a now deceased Montgomery farm sheet—upset his previous plans. He decided he would rather write than farm for a living.

"I always had a bent for writing," he explains. So he went to work for *The Inquirer-Sun*, a newspaper in Columbus, Georgia.

Following a year in Columbus, he joined **The Montgomery Advertiser** Staff. When he accepted his present position in 1925, he was assistant to the managing editor of *The Progressive Farmer* in Birmingham.

Cooper has been honored by a number of organizations for his editorial work. He was 1937-38 president of the American Association of Agricultural College Editors and named 1954 "Man of the Year in Service to Florida Agriculture." He is a member of Sigma Delta Chi, national journalism fraternity.

Mr. and Mrs. Cooper have no children. Nevertheless he has been very active in the past with the Gainesville Boy Scout troops. He led the American Legion troop there for 10 years and served as 1939-41 chairman of the District Scout Committee.

He is the only Gainesville member (and vice president) of the Board of Education of the Florida Conference of the Methodist Church. By virtue of that fact, he is on the board of directors of Georgia Seagle Hall (cooperative living organization at the University).

A man who enjoys outdoor sports, he hasn't been fishing "in years" although he still does "some" hunting. Relaxation—when he has time for it—consists of yard work and an occasional bridge game.

Sixty years old this past March 18, J. Francis Cooper has devoted more than half of his life to serving the Florida farmer and the state's agricultural community.

Few other men could have done so much, so well, as this extraordinary editor of Florida agriculture.

Machinery MAINTENANCE

By S. E. DOWLING
Assistant Agricultural Engineer
Florida Agricultural Extension Service

PROPER ventilation for the crankcase on an internal combustion engine is very important in prolonging the life of an engine.

Usually, a crankcase ventilation system is provided in order to reduce the collection of liquid contaminates which tend to accumulate in an engine crankcase. When such a system is operated properly, unburned fuel vapors, moisture vapors, etc. are carried out of the crankcase.

Moreover, a crankcase ventilation system that functions effectively will eliminate moisture. Thus it will guard against water sludge and will free the crankcase oil of previous accumulations that could not be prevented, particularly during periods of starting or warm-up of a cold engine or operation at low temperatures.

A later development in crankcase ventilation is a system that operates under a small amount of pressure.

Pressure is achieved by taking air from the main air cleaner and pumping it into the engine crankcase utilizing a vane-type pump. The outlet air from the crankcase is vented to the engine intake manifold or to the atmosphere.

The air cleaner element in the crankcase ventilated system should be serviced regularly.

Some tractors have a special ventilator cap. This cap should be cleaned by washing with kerosene.

Where varnish-like deposits accumulate in the cap, it may be necessary to use a solvent such as a strong solution of lye water for cleaning. Extreme care should be taken in handling such a solution.

If the engine has a ventilating tube and a condensing element, it is important that the small hole for letting the oil float back to the crankcase be kept open. The end of the tube must also be kept open.

If the condensing element needs replacing, it is important that the proper element be used. Such an element is made from moss, aluminum foil or brass. The material must be one that will not rust.

The facts presented here about the crankcase ventilating system are usually unimportant to the average tractor operator. Therefore he is not taking advantage of preventive maintenance practices that could lengthen the life of the internal combustion engine.

Check the crankcase ventilating system regularly. Give your engine at least an even break.

Co-Ral*
25% WETTABLE POWDER
LIVESTOCK INSECTICIDE

THE DRAMATIC DISCOVERY THAT KILLS SCREW-WORMS SIMPLY BY SPRAYING!

A new and remarkably effective insecticide for the control of screw-worms and other cattle insects has been registered by the U. S. Department of Agriculture for use on beef cattle, horses, sheep, goats and swine. It is called "Co-Ral," and is available for immediate use by the livestock industry.

Under intensive field testing for the past four years as "Bayer 21/199," Co-Ral has demonstrated exceptional ability to control screw-worms, cattle grubs, hornflies, lice and ticks.

Co-Ral is of particular interest to livestock men seeking a more effective and practical way to control screw-worms because:

1 CO-RAL is applied as a spray. It is a fast and easy method of screw-worm treatment, requiring minimum handling and labor.

2 CO-RAL protects sprayed animals from infestation for 10 to 20 days—long enough for most injuries to heal completely.

3 When used for screw-worm control, CO-RAL also automatically provides effective and extended control of cattle grubs, hornflies, lice and ticks.

4 CO-RAL kills cattle grubs inside the animal—but before they are able to damage meat or hide.

Now available through Dealers in Agricultural Chemicals!

*Trademark. Researched as "Bayer 21/199."

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"Chemicals for Agriculture—Exclusively!"

NATURALLY THE COW AND ORANGE ARE CELEBRATING! THEY'VE BOTH BENEFITED FROM FERTRELL-IZED SOIL!

Fertrell!

• ENRICHES THE SOIL
• STEPS UP PRODUCTION
• INCREASES PROFITS

FERTRELL is the best investment for your soil. It builds richer soil. It builds up humus that helps to retain moisture. It is a natural plant food—not a chemical stimulant—which means it stays in the soil and works over a long period of time. Follow the lead of thousands of wise successful farmers and citrus growers. Use FERTRELL. Order your supply *today!*

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DEALERS WANTED

Quality Said Key to Beef Sales

QUALITY—not price—is the all-important factor in beef sales.

Such, in essence, was the tip given Florida cattlemen during their recent mid-year convention in Cocoa. A. F. Crow, feedlot operator from Milford, Illinois, declared:

"The thing that holds down the sale of beef is not price but the disappointment to the housewife; she cannot get the same quality beef time after time. This very thing has been the big factor in promoting poultry."

If cattlemen would provide the grade of beef the housewife likes, she would willingly pay more for it. And, maintained the speaker, she would buy many more million pounds of such beef—instead of poultry, pork, cheese and fish.

Yet when the housewife cannot purchase the quality of beef she wants, she will buy a substitute product. And so another customer is lost.

Butchers of this country, Crow continued, could soon sell a lot more beef if they had a dependable supply of beef that is tender, beef that has good flavor, and beef that is not too fat.

Hybrid cattle which will grow faster and produce enough weight at 12 to 14 months of age to bring a premium on the market *can* be produced, the speaker asserted. He added:

"Such cattle must be young to be tender. The carcasses must carry enough fat covering and enough marbling to have the desired flavor."

Moreover, he added, the product must be available daily. This is where, Crow suggested, Florida cattlemen come into the picture.

Warmers sections of the United States are not the best places to produce British breeds. As a result, the Brahman and Charolaise breeds have developed—in quality and in quantity.

These breeds crossed with British breeds produce a calf that will outperform those from other sections of the country, Crow declared. According to his findings, the ¾ British breed and ¼ Brahman or Charolaise hybrid furnish the fastest growing acceptable type steer for the quality market he described.

Incidentally, two Florida units—Camp Ranch, Ocala, and the U. S. Sugar Corporation, Clewiston—help supply Crow with feeder calves meeting his special hybrid breeding specifications.

Crow annually feeds out between 1,300 and 1,500 cattle. (He would gladly handle more if the right quality of feeder calves were available.)

His operation begins in October, when the cattle are put in the feedlot. These selected animals are sold the following April, May or June.

From June to October, the Illinois operator has no cattle to feed. He appealed to Florida producers to alter their breeding program to fill this vacant gap during summer.

By altering the breeding program thusly, Crow explained, feedlot businesses would be able to operate on a 12-month basis. Thereby, a steady supply of preferred quality beef would be kept on the market.

It is possible, the speaker declared, to produce hybrid calves that will weigh 500 pounds when weaned at six months of age and go into the feedlot and gain 500 pounds more with six months of feeding.

The cost of producing a pound of beef is reduced considerably when you take a calf off the cow and fatten it to a choice degree of finish within 12 months from the time of birth to slaughter.

Crow's thinking regarding hybrid vigor is in line with experimental work already done by the USDA:

Results of a 14-year (1932-46) program at Iberia Federal Livestock Station, Jeanerette, Louisiana showed that Aberdeen Angus and Brahman crosses produced calves that were 18% heavier than calves from British breeds alone.

Furthermore, calves from the F_1 Brahman-English dams were 22 to 24% heavier than straight English-bred calves.

Statistics and opinions cited above are not to be construed to mean that Crow says hybrids are as good as purebreds. However he does believe:

Hybrid cattle can be made to produce beef more efficiently and of equal or better quality meat in less time and with less expense than is possible with purebreds.

Crow is studying the cattle business from the viewpoint of having a hybrid calf finished in his feedlot within six months after being weaned. He wants this animal to weigh 1,000 or more pounds, grade choice, and be of sufficient type and conformation to be welcomed by buyers at any cornbelt market.

In order to provide cattle of this quality beef, the breeder's herds must be improved as fast as possible with cows and bulls that will make a rapid rate of gain.

While not specifying any particular hybrid cross, the speaker did recommend the use of cows that grow the fastest and the largest. Calves from such cows, he said, are likely to produce the most red meat in the feedlot.

The story of hybrid corn was compared to the cattle business by the Illinois feedlot operator. He pointed out it took 20 years from the time hybrid corn was first developed to make it practical.

Cattle breeding is a long-range program. And it is one that requires as much good sound thinking and planning as the seed corn producers put into their research programs.

Over the years, feed conversion of poultry and hogs has been stepped up until these two meat products can now be produced very economically and efficiently. Similarly, the Illinois cowman is striving to produce a feeding program for cattle that will increase the conversion rate of gain and roughage into hybrid beef.

Most experiments to date have been carried out on the basis of feed efficiency on relatively purebred cattle. A fair amount of—but not enough—progress has been made on hybrid feed conversion, the speaker concluded.

To Cut Down Worms, Feed Calves Milk

MILK-FED calves have fewer worms.

USDA scientists report this finding after a long-time series of small-scale experiments at the Regional Animal Disease Research Laboratory, Auburn, Alabama. ARS parasitologists G. H. Rohrbacher Jr., D. A. Porter and H. Herlich say:

Calves on milk harbor fewer worms on certain economically important species. Furthermore, milk seems to stunt the worms' growth.

These results suggest that giving calves milk longer than usual might eliminate the need of early treatment for worms. Adding milk to the diet improves gains, too.

Beginning the experiments, Porter worked on 10 calves raised free of parasites. These calves were paired according to age at seven to 17 weeks.

One calf from each pair has been raised on milk along; the other got grain and hay along with milk. All were infested with larvae of large stomach worms (*Haemonchus placei*) and killed 4-5 weeks later.

The calves that had received only milk had smaller worms and far fewer of them. However the restricted diet didn't allow these animals to gain as well as those that also got grain and hay.

In a similar test, calves on milk, grain and hay were compared with calves weaned at 12 to 16 weeks. All were infected with *H. placei* and killed a month later. The milk-fed calves had fewer worms and gained better.

How about worm infections that are acquired naturally by grazing? Does milk have the same effect here as it does in the case of experimental infections?

Researchers put calves on pasture 54 days to find out:

All pastured calves got a grain supplement. And half of the animals got milk twice a day.

There was no significant difference in the number of stomach worms *Ostertagia ostertagi*. But the calves on milk had fewer *H. placei*, fewer small intestinal worms (*Cooperia* species), and fewer large intestinal worms (*Oesophagostomum radiatum*).

Similar results were obtained with young rabbits in pilot tests. Significantly, smaller numbers of small stomach hairworms (*Trichostrongylus axei*) and small intestinal worms (*T. colubriformis*) were recovered from unweaned rabbits than from weaned rabbits after experimental infection.

In a comparable test with four calves, however, weaning did not affect these species of worms.

Researchers aren't yet sure of the explanation for milk's effect on parasites. Possibilities include:

Changed conditions in the gastro-intestinal tract; enzymes and other types of protein sugars in milk; calcium provided by the milk; or a combination of factors.

One finding seems significant—milk tends to neutralize acidity in the abomasum (fourth stomach, where digestion takes place). Rohrbacher noted a direct correlation between pH of the abomasum and establishment of *H. placei*:

The more the abomasum tends toward neutrality, the fewer the worms and the smaller their size.

Milk's effect has been noted by other researchers. ARS parasitologist E. A. Knight found that among lambs exposed to natural infections, unweaned lambs had far fewer worms than weaned animals.

ARS parasitologist L. A. Spindler and associates fed pigs skim milk alone for three days, or once daily in lieu of a grain feeding. The pigs expelled most of their worms and made better gains.

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Announcing the NEW Eversman Hydraulic Control SCRAPER

Low Initial Cost
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Precision Performance

Front dump permits precision control of spreading—bucket rotates 10° beyond vertical to eject damp soil.

Horizontal position of bucket while loading makes cutting easier, requires less power.

It is now possible to do most dirt moving jobs by yourself—using your own tractor—at a low "cost-per-yard" expense.

- level land for efficient irrigation
- relevel areas that have settled
- grade fields for improved drainage
- fill gullies and low spots
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The Eversman Scraper is easy to operate, loads with low power requirements but with large scraper stability. It hauls at high tractor speed and the front dump feature permits accurate control of fill.

See Your Dealer TODAY... or write for FREE BOOKLET giving complete information.

EVERSMAN MFG. CO. DEPT. S-23 Curtis & 5th, Denver 4, Colo.

Citrusmen Applaud Townsend

No one—not even the guy who makes a citrus utilization forecast—knows how accurate it is going to be until the season is over and a comparison becomes possible.

Yet, despite one of the most disastrous freezing winters in history, the USDA's crop estimating office did an amazingly accurate job in forecasting the size of Florida's citrus utilization during the past season.

For this tremendous achievement, J. C. (Charlie) Townsend, Jr., head of the Orlando federal crop estimating office which originates the figures on the size of Florida's citrus crops, is getting a big pat on the back from many in the industry.

The first freezes occurred on the nights of December 12 and 13, 1957. And the market reaction was immediate.

Prices sagged disastrously. Many growers—too many, in fact—tried to find someone to buy their fruit which, although seriously hurt by the cold, was still usable if picked quickly.

It became definitely a "buyers' market." And it might have stayed that way for a much longer time.

Early in January therefore, Townsend came out with an analysis of the situation which did much to correct distorted ideas about the damage—and put prices back where they should be, based on supply and demand.

Made quickly but still representing a comprehensive analysis of conditions in all Florida citrus areas, the survey showed that there still remained a large amount of good fruit which could be sold in fresh form. These findings reassured growers that their market wasn't going to pot, that an outlet still existed for their fruit.

Statistics Show

There's no way of knowing how many millions of dollars this prompt action added to what growers finally received for their fruit. Undoubtedly, it was a big amount.

Just before the cold weather struck, the U. S. had been forecasting that Florida would produce a citrus crop totaling 142.5 million boxes.

On January 10, the first official forecast issued after the mid-December freezes came out. It gave the government's new estimate as 115 million boxes.

This figure was within a million boxes of what was actually harvested. No one could ask for anything more accurate than that.

Before the freezes, the U. S. estimated Florida would produce and use 36 million boxes of grapefruit. Following the December freezes, this was reduced to 32 million boxes—within a million boxes of the actual utilization.

Incidentally, this is the second straight year that the government's crop estimating has been almost uncannily accurate.

For the 1956-57 season, the first estimate issued on Oct. 10, 1956, totaled 135.2 million boxes, including 95 million boxes of oranges.

J. C. Townsend

The final figures were 135.4 million for the total crop, only 200,000 boxes more than the Oct. 10 figure.

Orange utilization was 93.3 million boxes, only a little more than a million boxes less than had been originally forecast.

Uncle Sam—through Mr. Townsend and his efficient force—certainly can take a bow for a fine job well done which has helped Florida citrus growers make substantially more money than they would have otherwise.

FLEX-O-SEAL
PORTABLE IRRIGATION PIPE
Flexible
QUICK-ACTION
COUPLING

Saves money!
... here's why

Fewer fittings needed, reducing friction loss, pump strain. Easier to lay, move, maintain. Heavy duty coupling withstands extreme pressures. Allows use of giant heads ... more coverage per setup ... fewer moves. Male, female ends specially constructed to retain perfect seal under hard usage. Pre-tested at 250 lbs. Interchangeable galvanized or aluminum. 3" to 8" diam.

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CHICAGO METAL MFG. CO.
3723 S. Rockwell St.
Chicago 32, Illinois

YOUR BEST CROP INSURANCE

We were there!

We saw it with our own eyes!

Case-o-matic DRIVE 800

WINS COMPETITIVE DEALER'S FUEL ECONOMY CHALLENGE

. . . plowed farther, longer, deeper on one gallon of fuel

Darl Kistler
RR1, Francesville, Ind.

Ralph Yeoman
RR1, Francesville, Ind.

(An Open Letter Signed by the Official Judges)

Francesville, Indiana
April 26, 1958

TO WHOM IT MAY CONCERN:

We the undersigned were judges at a field economy contest sponsored by the Francesville Motor Company of Francesville, Indiana (a major competitor to the Case dealer) who challenged all dealers to a contest against his model Tractor "A", to be decided on the following points:

1. Distance traveled
2. Average depth plowed
3. Length of time tractor would run on one gallon of fuel
4. Width of plow cut

Phil Albrecht
Box 461, Francesville, Ind.

James Markin
RR2, Winamac, Ind.

The only one accepting the challenge was the Winamac Sales Company, Case dealers in Winamac and Francesville. They entered a Case 800 Case-o-matic tractor pulling a Case A Series four bottom, sixteen inch pull-type plow.

The results of the contest were as follows:

	Case	Tractor "A"
1. Distance traveled	4,023 feet	3,725 feet
2. Average depth	9.92 inches	9.88 inches
3. Length of time run on one gallon of gas	17 minutes	15 minutes 50 seconds
4. Cutting width	64 inches	64 inches

Charles Speicher
RR1, Francesville, Ind.

Farrell J. Bailey
RFD, Monon, Ind.

The Case-o-matic tractor was operated in Case-o-matic drive for the entire period of the contest. In our opinion this was a fair test of performance and the above figures are accurate to the best of our knowledge.

SIGNED: Judges

Albert Westphal
Mary E. Kopka
Ralph Yeoman
Darl Kistler
James Markin
Charles Speicher

Time Keepers

Farrell J. Bailey
Phil Albrecht

Albert Westphal
RR1, Francesville, Ind.

Max E. Kopka
RR1, Francesville, Ind.

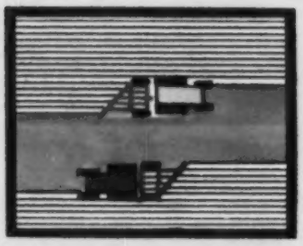
WINNER ON EVERY COUNT

Superior in every feature . . .

Case-o-matic DRIVE —your best buy by every standard . . .

Case-o-matic DRIVE 800 TRACTOR

SUPERIORITY PROVED AT FRANCESVILLE



On April 28, 1958, Francesville Motor Company challenged all dealers in his trade area to meet his Tractor "A" in a fuel-economy plowing test to be decided on the following points:

1. Distance traveled
2. Average depth plowed
3. Length of time plowing on 1 gallon of fuel
4. Width of plow-cut

Only the Case dealer, Winamac Sales Company accepted the challenge. He entered a Case-o-matic Drive 800 tractor against Tractor "A". Each tractor started out with only one measured gallon of fuel in the tank, and plowed with a 4-bottom 16-inch plow. Both tractors plowed continuously until their fuel ran out.

Six judges and two timekeepers selected from among the several hundred farmers present carefully checked each step of the contest, and have warranted its fairness as well as the accuracy of the results.

Now, let's analyze the figures!

1. **Distance Plowed**—the Case-o-matic Drive 800 operating in torque converter plowed 4,023 feet, while Tractor "A" plowed only 3,725 feet. That's a furrow nearly 300 feet longer than that plowed by the challenger.
2. **Depth Plowed**—the Case-o-matic Drive 800 plowed at an average depth of 9.92 inches while Tractor "A" plowed at 9.88 inches. The Case-o-matic Drive 800 plowed not only farther but deeper.
3. **Time Plowed**—the Case-o-matic Drive 800 plowed for 17 minutes on 1 gallon of fuel, while Tractor "A" lasted only 15 minutes and 50 seconds. That's a 7.3% fuel savings.

4. **Cutting Width**—both tractors plowed a 64-inch width.

Here's what this challenge means to you. The Case-o-matic Drive 800 delivers more work per gallon of fuel. You can count on *at least* 1 acre more per day with Case-o-matic Drive.

ANY WAY YOU COMPARE . . . Case-o-matic DRIVE GIVES YOU MORE TRACTOR FOR YOUR DOLLAR

By any standard of comparison—pull-power, work-capacity, stamina, ease of handling, driving comfort *or* fuel economy—revolutionary new Case-o-matic Drive offers you much more of everything that counts. Here are the outstanding features of the Case-o-matic Drive 800, compared with other leading tractors. The horsepower ratings and other data shown here are taken from the manufacturers' own literature and other reliable sources available to us at the time of printing.

Case-o-matic DRIVE 800 COMPARED WITH OTHER LEADING TRACTORS

	Case-o-matic Drive 800	Tractor A	Tractor B	Tractor C	Tractor D	Tractor E
Case-o-matic Drive—(combination of torque converter, direct drive and independent PTO)	Yes	No	No	No	No	No
Maximum Pounds Pull[1] in Plowing Gear[2] (without shifting)	6500-7500[3]	5545	4433	Figures not avail.	Figures not avail.	3087
Automatic Increase in drawbar pounds pull in any gear	Yes	No	No	No	No	No
Diesel Engine Design—Main bearing between all connecting rods	Yes	No	No	No	No	No
Total main bearing area	84.8 sq. in.	47.1	45.5	58.8	70.5	46.5
Bearing area per cu. inch displacement	.338 sq. in.	.168	.126	.222	.249	.168
6-Point Diesel Fuel Protection	Yes	No	No	No	No	No
Wet Replaceable Cylinder Sleeves	Yes	No	No	Yes	No	Yes
Oval Offset Powerdyne Combustion Chamber	Yes	No	No	No	No	No
Diametrically-opposed Injectors and Powrcels	Yes	No	No	No	No	No
Fully Independent PTO with Priority on Engine Power	Yes	No	No	No	No	No
Power Steering	Yes[4]	Yes[4]	Yes[4]	Yes[4]	Yes[4]	Yes[4]
Self-energizing Double-Disk Brakes	Yes	Yes	No	Yes	Yes	Yes
Rear-mount Implement Hitch as Standard Equipment	Yes	No	No	No	No	No
Power-adjustable Rear Wheels	Yes[4]	Yes[4]	No	Yes[4]	Yes[4]	Yes

1. Competitive figures are taken from official tractor tests. All are based on pull at rated RPM.
2. Plowing gears with maximum speed in 4.3—4.7 mph range.
3. Based on engineering tests. Tractor is capable of pulling more, but maximum pull is restricted by weight, tire or traction limitations.
4. Optional at extra cost.

MAKE THESE 6 TESTS

See for yourself how **Case-o-matic DRIVE** *superiority proves out in the field*

TEST 1

Deep-plow your toughest field

Hook onto a big moldboard plow. Take it out to your toughest field. Select a good plowing speed . . . then sink those bottoms into the ground deep and make a fast round. Notice how you pull through the tough spots, automatically. There's no need to stop and shift down. Keep a record of fuel used—convince yourself you're getting more work done per hour, per gallon.

Disk down to the spools

Hitch onto a heavy, deep-cutting disk. Pile on all the weight you want, and disk in a field gear higher than you would use with a conventional tractor. Pull right through the tough spots without shifting or stalling. Case-o-matic Drive will cut your disking time to a minimum.

TEST 2

TEST 3

Turn at row ends

Attach a drive-in mounted cultivator, inching the tractor safely and precisely into position. Start down the rows, cultivating at any speed you like, in direct drive. Then flip to torque converter and turn at the row end . . . without clutching or shifting. Enjoy the same precise brake-or-accelerator control for cultivating tiny delicate plants.

Test engine power PTO priority

Hook onto your PTO-driven machine and bale, chop or combine through heavy stands. See how you move steadily along with plenty of constant PTO power. Slow your tractor to a crawl with the brakes. Notice how your PTO-driven machine continues to operate at the same speed regardless of your ground speed. No clutching, no shifting, no stalling—you'll bale, chop, combine more material every hour.

TEST 4

TEST 5

Flip to direct drive on-the-go

Take a planter or drill into the field. Once the tractor is in motion, flick into direct drive for precise speed and uniform seed placement. Approaching the end of the field, change to torque converter drive and brake to a safe, effortless turn . . . without clutching or shifting. Observe the fast hydraulic control of your drill or planter.

Start on a hill with a loaded wagon

Hitch up to a heavy wagon. Start in high road gear and move out smoothly and swiftly with the accelerator. Stop on a hill without clutching. Hold the tractor in place with your brake or accelerator. Then, touch down lightly on your accelerator and move smoothly ahead. There's no chance of a dangerous stall.

TEST 6

CALL YOUR CASE DEALER TODAY. . . he'll be glad to bring a Case-o-matic DRIVE Tractor to your farm and help you make these tests

YOU NEED NOT WAIT ONE MORE DAY

to save time and money

with Case-o-matic DRIVE

and rugged CASE tillage tools

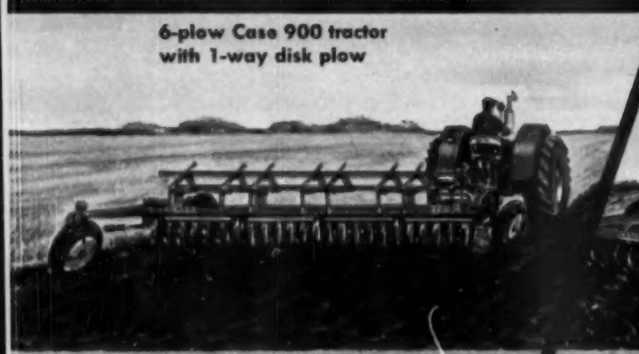
You can buy right now on the CASE Crop-Way Purchase Plan

Act now to earn more this fall with Case-o-matic DRIVE efficiency

See your Case dealer and make a demonstration date to bring out the Case-o-matic Drive tractor and tillage tools that fit your farm. With Case-o-matic Drive you can plow in a faster working range than with conventional transmissions. When you come to tough spots, Case-o-matic Drive automatically increases pull-power to get you through without down-shifting or stalling. The result is more acres plowed per day, every day.

Case-o-matic Drive 800 with Case 5-bottom plow

Case 5-bottom A plow has big throat openings to handle rank growth without clogging. The finest features ever built into a plow make Case plows ideal for toughest soil, trash or weeds.



6-plow Case 900 tractor with 1-way disk plow

Case WS one-way plow in 12 or 15-foot sizes has famous Case Seedmeter for uniform sowing . . . flexible 3½-foot gangs for precise penetration in uneven ground.

4-plow Case-o-matic Drive 600 with Case disk harrow

Case S wheel-type disk harrow, in 7 to 17-foot sizes, cuts, chops and mixes heaviest crop residue and trash with soil . . . does in one trip what other disk harrows do in two. Hydraulic lift control.

3+ plow Case-o-matic Drive 400 with subsoiler

Case T-620 series subsoiler with Snap-lock Eagle-Hitch is available in 1 or 2-point models with or without gauge wheels. Flexible hitch for contouring. Standards adjustable for different soils and spacings.

SEND TODAY FOR FREE COLORFULLY-ILLUSTRATED CATALOG ON REVOLUTIONARY NEW Case-o-matic DRIVE

Find out how Case-o-matic Drive works, and the benefits it gives you. See why it does finer, faster work with greater operating convenience and operator comfort. Check below the illustrated catalogs you want on money-making Case-o-matic Drive tractors and Case machines and implements. Send to J. I. Case Co., Dept. 98G, Racine, Wis.

- ☐ Full-line tractor catalog—12 sizes
- ☐ Case WS one-way disk plow
- ☐ Case S wheel-type disk harrow
- ☐ Case mounted plows
- ☐ Case pull-type plows
- ☐ Case T-620 series subsoiler

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Form No. A45358H Printed in U. S. A.

Put your new tractor or machine to work right now with the flexible CASE Crop-Way Purchase Plan

Don't wait another day to profit more from a new Case-o-matic drive tractor. See your Case dealer today about the Case Crop-Way Purchase Plan. You can buy right away, make payments later when you have money coming in from crops or livestock.

J. I. CASE

J. I. CASE CO. • RACINE, WIS.

1st in Quality for Over 100 Years

FIRST DELIVERIES of fresh-frozen juice from their own trees were received last month by the governors of America's *48* states and five territories. Oranges grown on the trees are processed by Minute Maid and delivered periodically throughout the year.

"Governors' Grove," a one-acre plot containing *53* valencia orange trees, was established by Minute Maid to commemorate the 50th annual National Governors' Conference held last May in Miami Beach. Each governor received a lease to an orange tree "and the *400* square feet of rich Florida soil surrounding it in Lake County, State of Florida." The lease reverts to the governor's successor when an incumbent leaves the post.

Since becoming honorary "Florida citrus growers" last May, seven governors have accepted membership in Florida Citrus Mutual.

Soil Bank Reserve Program Highlights For 1959 Revealed

WORK IS UNDER WAY in setting up the Soil Bank Conservation Reserve program for the 1959 crop year.

State Agricultural Stabilization and Conservation Committee chairman H. B. Foster says highlights of the tentative program for next year are:

Proposed national average rental payment to participating farmers will be $13.50 per acre, up $3.50 per acre from previous years. The tentative annual payment rate for 1959 in Florida is $12 per acre, compared with $8 an acre under 1956-58 contracts.

County and individual farm payment rates will be determined by ASC committees (as in the past) primarily on the basis of relative productivity, rental rates, and agricultural land values. County committees will have more freedom than in the past in making individual adjustments.

The full payment will be earned by putting into the Conservation Reserve land which has been in Soil Bank "base" crops (grain, oilseeds, and raw crops) during the past two years.

Lower payments may be earned by putting in "non-diversion" land —principally harvested hayland and rotation pasture land which has been in a regular rotation on the farm.

Farmers who put all eligible cropland into the Conservation Reserve will be able to earn the maximum regular payment rate for all "reserved" acres plus an additional 10% for "whole farm" participation.

A farmer may offer land at less than the regular rate if he wishes. This may make his offer more certain of acceptance.

In addition to the annual rental payment, a farmer who participates in the Conservation Reserve can get a payment covering a substantial part of the cost of establishing approved conservation practices on reserved land.

* * *

Automation Pays In Dairy Farming

USE OF BULK MILK tanks and pipeline milking systems save labor and result in higher quality milk—even on moderate-sized dairy operations.

So says economist Stephen J. Brannen of the Georgia Extension Service. An analysis by him of a Georgia Experiment Station study shows bulk handling to have these advantages:

(1) It is more economical than can hauling at all output levels above 30 gallons a day.

(2) Quality of the milk is higher.

(3) Spillage and stickage losses of milk are reduced by about six to eight cents per 100 pounds.

(4) Hauling costs were found to be lower because of larger pay loads and pickup every other day.

The Georgia study also showed pipeline milking systems to be economical on farms milking 25 or more cows per day because four minutes of labor was saved each day and more cows could be handled with the same amount of labor.

It was also found that the labor saved would pay for the pipeline milker in an average of three years.

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Forecasting Tomato Supplies *(Continued from Page 11)*

units) will be harvested three and one-third days apart in the spring months (if the average daily heat accumulative is 30 units).

This is the sort of thing that happens when a farmer observes that his January and February plantings come on at about the same time.

Excessive rain or cold weather, of course, will affect the health of the plant. These elements will also affect the quality and quantity of fruit harvested.

Likewise, the cultural practices—such as spraying, fertilizing, and so forth—also affect the crop.

The chart on page 11 illustrates the relationship that existed between plantings and shipments in Dade County during the 1956-57 season.

Weekly Plantings	Acres Planted Per Week	Yield Per Acre Boxes	Boxes Harvested by Weeks 1st Week	2nd Week	3rd Week	4th Week	5th Week	6th Week	7th Week	Total Boxes by Crops
1st	100	200	4,000	6,000	6,000	4,000				20,000
2nd	100	200		4,000	6,000	6,000	4,000			20,000
3rd	100	200			4,000	6,000	6,000	4,000		20,000
4th	100	200				4,000	6,000	6,000	4,000	20,000
Total boxes by weeks			4,000	10,000	16,000	20,000	16,000	10,000	4,000	80,000

HYPOTHETICAL PATTERN OF HARVEST based on four weekly plantings picked at regular weekly intervals.

Just when you get enough money to buy something you had classed as a luxury, it ceases to be a luxury.

Peanut Profit Tips

PROFIT-MINDED peanut growers would do well to use both recommended seed and improved cultural practices.

Such is the advice given by the Oklahoma Experiment Station. Recent tests there showed that:

Use of recommended varieties of peanut seed—instead of common seed—resulted in a 15% increase in yield and an extra $12 per acre.

By using improved cultural practices—such as seed treatment, weed and pest control measures, recommended rates of planting, seed size, and methods of cultivation—the yield was increased 30% and profit upped $24 per acre.

Thus the combined value of recommended varieties and cultural practices is reported to have added up to a 45% increase in yield and $36 of additional income per acre.

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Citrus Insect Control for August 1958

By
R. B. JOHNSON, R. M. PRATT, and W. L. THOMPSON*
Florida Citrus Experiment Station, Lake Alfred

Purple scale infestations increased with unusual rapidity in July and will be at a higher level than usual in August. Infestations on the fruit are especially noticeable.

Red scale infestations also increased sharply in July, but the general level is still low, especially in the northern districts. By fall, however, the population is expected to be high, so growers that are infested now should be watched carefully.

Purple mite and Texas citrus mite populations will be low in August, and mealybug infestations are at the lowest level in years.

Rust mite infestations increased very rapidly in July and will reach a peak at an extremely high level early in August. Infestations will not disappear in August as they did last year, and the fact that good control may have been obtained in June or July does not guarantee that there will be no rust mite problem during the rest of the summer or in the fall.

Spray Program

Scale Control: Spraying for scale control is usually at a minimum in August. This year more than the usual number of groves will need an August scalicide. Included will be some groves that were sprayed in early June or before, as well as those groves that have not as yet received a scalicide this year. The reason for this is that the predicted increase in purple and Florida red scales has materialized and will probably continue. By late August this increase will have resulted in the recovery of purple scale to injurious populations in many groves. Growers are therefore cautioned to make frequent checks for scale in as many groves as possible and to spray for purple and chaff scale wherever they are numerous.

The fruit of tangerines, Temples, and all early varieties being grown for the fresh fruit market should be checked especially carefully for purple scale and chaff scale. There are two good reasons for this. First, these two scales cause a grade-lowering green spot that cannot be removed in the coloring room. Every year some crops are of little value as fresh fruit because of failure to keep the fruit free of these scales. Second, live purple scale under the button can result in a serious fruit drop later.

Another location to check for scale is on inside foliage. Many groves, especially those that were seriously damaged last winter, have produced a heavy growth of inside foliage. This is an ideal location for scale to increase unnoticed. Where scale is numerous, a scalicide should be applied to prevent scale movement to fruit and the outside canopy of foliage.

No oil spray of any type is recommended during August or at any time during the fall months because oil may reduce the soluble solids and result in a high percentage of green fruit. Parathion and malathion, however, do not have these adverse effects and should be used in preference to oil wherever a scalicide is needed.

Where no scalicide has been applied to date, parathion should be used at the dosage of 1.7 pounds of 15 percent material, or its equivalent in other formulations, per 100 gallons. Malathion should be used at 5.0 pounds of 25 percent powder or its equivalent. Where a scalicide, whether oil, parathion or malathion was used in the post-bloom spray or later, the dosage of parathion may be reduced to 1.0 pound and the dosage of malathion to 3.0 pounds per 100 gallons.

Rust Mite Control: Rust mite is usually the chief problem in August and this year will be no exception. This is very important, especially to those who wish to grow bright fruit. In July of 1957, just a little more than a year ago, Florida experienced the most rapid and pronounced decline in rust mite populations recorded in many years and there was almost no rust mite in August and September. This turn of events was unexpected in all circles and many attributed it to the widespread use of zineb. Nothing could be farther from the truth because this decline also occurred in experimental plots and commercial groves that received no zineb in 1957.

Now in 1958, because of the experience of 1957, many still expect a June or July application of zineb to give rust mite control the rest of the year. Although this may be realized in some cases, the present outlook is for plenty of rust mite in August or September whether zineb has been used or not. So do not fail to check for rust mite, especially in tree tops, and do not fail to respray if they become numerous. Large numbers of rust mite will russet fruit at any time, regardless of previous treatment.

Three materials are available for rust mite control in August. These include zineb, Chlorobenzilate, and wettable or dusting sulfur. Zineb, at the dosage of ½ pound per 100 gallons is by far the most effective of the three. However, it has no fumigating action and kills only when it actually contacts the mites. This means that it must be applied thoroughly for best results. Chlorobenzilate also at ½ pound or ½ pint per 100 gallons, is slightly more effective than sulfur, but much less effective than zineb. Like zineb, good coverage is necessary with Chlorobenzilate for good rust mite control. Sulphur sprays and dusts are the quickest to apply because sulfur gives a good fumigating action and thorough coverage is not absolutely necessary. Sulfur is preferable where thorough coverage cannot be obtained with zineb or Chlorobenzilate.

Zineb, Chlorobenzilate, or sulfur may be combined with parathion or malathion.

Purple Mite and Texas Citrus Mite Control: Although these mites will undoubtedly be numerous in a few groves during August, control measures are believed impractical and are not recommended at this time.

Details of spray schedules and the various materials used will be found in the "Better Fruit Program" and this should be consulted to determine which materials may or may not be combined. For further information, consult the Citrus Experiment Station at Lake Alfred or Fort Pierce.

SCALE AND MITE ACTIVITY BY DISTRICTS*

District	*Purple Scale*	*Purple Scale*	*Red Mite*	*Rust Mite on leaves*	*Rust Mite on fruit*
West Coast	4.77	2.63	2.25	2.38	2.76
Indian River	4.52	4.00	2.40	2.34	2.56
Upper East Coast	5.80	0	1.20	1.00	.75
Gainesville	5.00	0	2.20	1.60	2.00
Orlando	4.49	2.42	1.47	2.00	1.69
Brooksville	4.98	0	1.16	2.85	2.62
Ridge	5.15	3.72	2.50	2.14	2.50
Bartow	6.50	4.17	1.84	3.20	3.60
State Average	5.01	3.30	1.88	2.24	2.33
Last Year	4.66	3.83	1.20	2.75	2.65

*Third week in July. Activity is computed from populations, amount of hatching of scales, and number of groves with increasing or decreasing infestations. Activity is considered high if above 4.0 for purple scale, 3.0 for red scale, and 1.5 for mites

*Written July 24, 1958. Reports of surveys by Harold Holtsberg, Fort Pierce; J. W. Davis, Tavares; K. G. Townsend, Tampa; T. B. Hallam, Avon Park; and L. M. Sutton, Lake Alfred.

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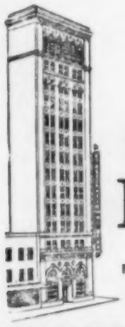
to see the beautifully remodeled and modern quarters of First National. Bob Morris, our agricultural representative, has moved into a new and enlarged office, where he's doing the same important job of working with Florida ranchers and growers. Bob Morris will gladly show you around our new facilities—and assist you in every way. Stop in soon.



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Good News For Cardiac Farmers

CARDIAC farmers may now continue a safe work routine without further heart disease.

This heartening news is announced by the American Heart Association as a result of a recent research project. The findings are contained in a new booklet, "A Safe Work Load for Farmers with Heart Disease."

Many common jobs on the farm are classified in the new guide according to the amounts of energy they require. These jobs are grouped into three categories: light, moderate, and heavy work.

In addition, the booklet contains a nine-point check list to help the farmer conserve his energy.

Research has pointed out that age, health, body build, job experience, state of mind, weather, rate of work *and the advice of the family physician* must all be considered in determining the safe work load for the individual.

A slow, steady rate of work may enable the cardiac farmer to accomplish jobs that would otherwise overtax his capacities. Because of recent knowledge gained from heart research, many farmers and other workers with heart disease are now able to return to jobs that a few years ago would have been considered impossible for them.

Free copies of the booklet may be obtained from the Florida Heart Association, 2427 Central Avenue, St. Petersburg. They are also available from local heart associations and councils.

CAUTION: Farmers with heart disease should always consult with their personal physicians in establishing a work routine as outlined or suggested in this booklet.

Program Topics Set For Cattlemen Meet

THE FIFTH ANNUAL Cattlemen's Institute will be held Tuesday, August 19, at Lake Placid.

Program topics and speakers are listed below.

Tuesday Morning

"Outlook for the Florida Cattle Industry for the Ensuing Year"—Dr. E. W. Cake, Extension Service marketing economist.

"Use of Antibiotics, Hormones and Tranquilizers in Cattle Rations"—Charles E. Haynes, assistant animal husbandman, Everglades Experiment Station.

"Use of Systemics for Control of Cattle Parasites"—James E. Brogdon, Extension Service entomologist.

"Feedlot Operation Practices"—O. W. Dixon, Tampa; Mrs. Frank Deeland, Ocala, and Roscoe Bass, Avon Park.

"A Report from The Florida Cattlemen's Association"—J. O. Pearce Jr. (president), Okeechobee.

Tuesday Afternoon

"Report on Activities of the Florida Beef Council and Plans for the Future"—George Young, Belle Glade.

"Amounts of Feed for Wintering Cattle of Different Ages"—J. E. Pace, Extension Service animal husbandman.

"Wintering Beef Cattle"—Tommy Bronson, Moore Haven; William Stitt, Clewiston, and W. G. Kirk, Range Cattle Station, Ona.

"Increasing Food Supplies on Florida Ranches"—E. M. Hodges, Range Cattle Station agronomist; J. E. McCaleb, Range Cattle Station assistant agronomist; D. W. Jones, associate county agent, Fort Myers; J. R. Henderson, Extension Service Agronomist.

"Silage—and Hay-Making Costs"—E. S. Holmes, assistant agricultural engineer, Gainesville Agricultural Experiment Station.

* * *

Lines on the face are the shorthand of the soul.

Why Gamble with your crops— and profits

Magnesium deficiency in citrus, and vegetable crops as well, can be most costly—both in quality and quantity of yield. For citrus, why not follow the recommendations of the Florida Citrus Experiment Station at Lake Alfred which stress the need for large applications of magnesium for citrus in soluble form and state that it is usually applied as a sulphate.

Play safe with BERKSHIRE'S EMJEO*

(80/82% Magnesium Sulphate)

For many years this dependable source of soluble magnesia has been a favorite primary plant food of Florida growers—along with nitrogen, phosphorus and potash. Used in combination with Muriate of Potash, it is usually more economical than other forms of potash and magnesium.

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Living IN FLORIDA

By Barbara Clendinen

Two of the handsomest kitchens I've seen lately are as feminine as a satin slipper without losing an ounce of practicality.

Both desert the flamboyant reds, yellows and strong blues used in so many kitchens. Instead, walls and appliances are a heavenly, soft pink, a shade that trails off naturally and effectively from the tones of nearby rooms.

Turquoise accents the pink in Mrs. H. Grady Lester, Jr.'s kitchen. It appears fleetingly in the wallpaper, firmly in the heatproof material which surfaces the cabinets.

White is the contrast note in Mrs. Frank M. Frankland's dream kitchen, appearing in the counter tops and floor surfacing.

Built-in appliances are used throughout the Frankland kitchen: Wonderful wall ovens at eye level, with no stooping to baste a turkey or test a cake. Wonderful wall refrigerators into which you peer and store foods with the squat-squint routine gone forever. Equally wonderful wall freezers line the walls.

Most of today's new appliances give a built-in look even though they're the type which can be moved in and out without carpentry or extra construction. They are square-lined, fitting so closely to walls and between cabinets that they look tailor-made.

New freezers tuck under counter tops. They are available with a chopping block top, if desired (and isn't that a wonderful idea?).

New refrigerators fit neatly over base cabinets. Colors range widely and if you're timid, you can still buy standard white, a handsome copper or chrome.

Kitchen Tips

To remodel your kitchen or plan a new one, keep these pointers in mind:

About 10% of the home-building dollar goes into kitchens. This figure runs low, of course, when you plan a really sumptuous area but it's basic for an attractive, efficient kitchen.

Your basic work pattern should form an invisible triangle. There are three areas to consider: 1. refrigerator and food storage center, 2. cooking and serving center, 3. sink and cleaning center.

The food storage and refrigerator center ideally has a refrigerator and freezer, chopping block and at least 36 inches of counter.

The cooking center is built around a range and oven. It should include an exhaust fan, hooks and racks for utensils and a counter at least two feet wide on each side of the range. Many chic kitchens today add a rotisserie and most are planned to be immediately adjacent to a service area.

The clean-up area, with a minimum of four feet, should have a sink with spray attachment, dishwasher, disposer and ventilated storage compartments for vegetables and damp towels.

NEW FREEZER tucks under counter, has chopping block on top.

A really large kitchen can accommodate many appliances that a small kitchen can't squeeze in. But don't create extra steps by lining up everything on four walls. A peninsula or island cuts down traffic tangles and unnecessary hikes.

This space breaker might be a snack bar, cooking center or storage area. With built-in surface cooking units, and refrigerators and freezers with tidily enclosed backs, appliances can line up in the middle of the room and present no unsightly views.

A fourth area ranks high in importance. It is a desk and working surface where menus can be planned, budgets balanced while supper cooks or homework done near mother's checking gaze.

YARD & GARDEN

By Marguerite Schwaen

Because bougainvillea has been a familiar sight in Florida for many years, most people think its magnificent bloom is easy to achieve. Its quick, heavy growth beguiles the novice into the belief that here is a simple, native plant that will bloom for anyone.

Actually if not planted in the right location, bougainvillea will never bloom even though it will obligingly put on vigorous, woody growth.

Southern exposure and lots of sun are essential for bloom. A vine planted in semi-shade or at a northern exposure is doomed as a blooming specimen. No amount of cries to heaven will be answered; no amount of extra fertilizer will put bloom on its boughs.

When the location is right, the purple (Sanders) variety flowers practically the year around. The more highly regarded Crimson Lake (red) and Praetorium (salmon) bloom at irregular intervals; late winter and early spring are their prime seasons.

Picking the right variety is important in the struggle for showy bloom. The Barbara Karst has bracts similar in color to Crimson Lake but has a more compact growth with flowers along the stems as well as at the shoot terminals. In full flower, it's a huge, red mass with no apparent branches or leaves.

Crimson Lake has the greatest following and is the one that gardeners strive hardest to get into full flower. Where luck isn't prevailing, a switch to Barbara Karst with full sun and a southern exposure is the best way to attain a red bougainvillea in bloom.

The white bougainvillea has its devotees and some enchanting names—Madonna, Purity and Moonlight among them.

Usually called Afterglow, Praetorius originated as a bud sport of Crimson Lake and is like it except for color. The bracts are yellow to orange when young, changing to copper and salmon with age.

Only the purple bougainvillea grows effectively as a free standing shrub; all the others need support. Soil requirements are not difficult for the vine grows well on sand, clay, muck, marl or rockland.

Manganese deficiency has been identified on several varieties with the purple showing the greatest lack. When this condition exists, the leaves have a splotched, variegated appearance with the main rib and small veins remaining green.

This deficiency is usually corrected in bougainvillea on acid soil by an application of manganese sulfate. An ounce for small plants is adequate, while mature vines require up to a pound. Sometimes a second application is necessary three or four months later.

Soil applications are not always satisfactory on vines growing in alkaline soil. Here a spray of one ounce of manganese sulfate and one-half ounce hydrated lime to one gallon of water usually corrects the trouble.

Take cuttings now: July's the best month to take cuttings and August is a runner-up. Cuttings taken at this time of the year will grow when similar cuttings at other seasons fail.

Select cuttings about 12 inches long from new, hard wood, about one-third to one-half inches in diameter. Cut from a plant that has good blooming habits and insert cuttings in soil six inches deep so they can be kept moist until they root.

BEST RECIPE OF THE MONTH

Pack A Picnic This Month

Goodies for your picnic basket won prizes for three readers this month. A safari to shore or lake will be extra special with these delectables.

Mrs. George Miller, 835 Ridge Ave., Pittsburgh, Pa., won $5 for her pinwheel picnic burgers. Here's how she makes them:

Pinwheel Picnic-Burgers

⅔ cup (small can) evaporated milk
1 egg
1½ pounds ground beef
½ cup fine cracker crumbs
½ teaspoon salt
¼ teaspoon pepper
1 teaspoon dry mustard
¼ cup finely chopped onion
½ cup finely chopped green pepper
1 5-ounce jar pimiento cheese spread
6 hamburger buns split

Combine milk, egg, beef, crumbs, seasonings, onion and green pepper. Blend until well mixed.

Form mixture into 12 inch square on waxed paper. Spread with cheese spread. Roll up jelly roll fashion; seal edge. Cut in 1 inch slices.

Place each slice on hamburger bun half, covering completely. Place on broiler pan or outdoor grill and broil 5 inches from heat for 5 to 7 minutes.

• • •

This sturdy salad can star as the main dish in a picnic basket or as a happy companion for fried chicken. It won $2 for Mrs. Mayne Deafenbaugh, 939 Cronley Pl., Sarasota, Fla.

Hearty Pea Salad

1 can small green peas, drained
½ large sweet onion, diced
4 to 6 stalks celery, diced
6 sweet gherkins, diced
½ cup cubed natural cheese (muenster or longhorn)
6 hardcooked eggs, riced

Use a teaspoon of the pickle juice, poppy seeds, garlic salt, mayonnaise and sandwich spread to moisten these ingredients, folding in carefully with a fork. Sprinkle top with paprika. This is best if allowed to mellow overnight in refrigerator.

Add brownies, fruit and a thermos of iced tea for a simple, satisfying picnic.

• • •

A luscious blackberry jam cake, flecked with raisins and pecans, travels majestically in any picnic basket. It's the pet recipe of Mrs. Robert Moore, Valley View Farm, Hopewell, N. J.

Luscious Jam Cake

¾ cup butter
1½ cups sugar
4 eggs, separated
3 cups sifted flour
1 teaspoon baking powder
1 teaspoon baking soda
1 cup buttermilk
1 cup blackberry jam
1 cup raisins
1 cup chopped pecans

Cream butter well, add sugar gradually, continuing to cream thoroughly. Add well beaten yolks of eggs. Sift flour, measure and re-sift with baking powder and soda; add to creamed mixture alternately with buttermilk, beating well after each addition.

Stir in jam, raisins and pecans. Fold in stiffly beaten egg whites. Turn into three greased, floured layer pans.

Bake at 350 degrees for about 30 minutes or until cake springs back when touched with finger. Ice with boiled frosting.

Note: Cupcakes carry well in picnic baskets. Divide this recipe into cup cake pans, bake 15 to 20 minutes and frost.

Witches will fly and black cats will yowl before you know it. For our October issue, we want your special Hallowe'en recipes. (We need them to bribe the goblins out of our kitchen.)

Your entry can be an orange and black salad for grown-up parties or a punch and cookies item for teen-agers. Just so it fits the season when the moon turns red and white things whisk through the shrubbery.

Send your recipe by August 28 to:
Best Recipes
FLORIDA GROWER & RANCHER
P. O. Box 2350
Tampa, Fla.

We'll pay $5 for the best idea, $2 for the second prize and a two year subscription or renewal for honorable mention.

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Save money by making this cute outfit for your grammar schooler. Blouse, jumper and jacket can be whipped up swiftly with this printed pattern.

Pattern 9329: child's sizes 2, 4, 6, 8, 10. Size 6 jacket and jumper take 2⅞ yards 35 inch fabric; blouse takes ⅞ yard 35 inch material.

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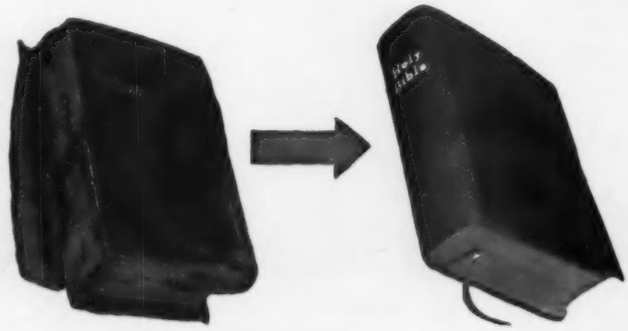

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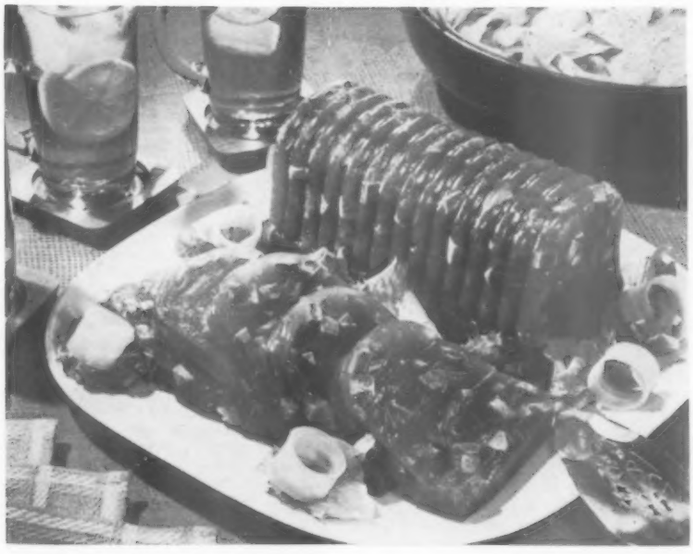

Frosty Suppers Tease Heat-Dulled Appetites

By LORA A. KISER

FROSTY SUPPERS, accented by crusty, hot breads, are perfect for August evenings.

An iced soup and a congealed seafood loaf tease heat-dulled appetites. When the dessert is both rich and delicate, such as pineapple chiffon cheese cake, it's a grand climax.

Plan suppers that stem mainly from pantry shelf items, that enable cool-of-the-morning preparation and easy supper service.

August Supper

Iced Cream of Tomato Cup
Double Decker Salmon Loaf
Barbecues Potato Chips
Buttered Green Peas
Pepper Rings — Carrot Sticks
Garlic-Buttered Bread
Pineapple Chiffon Cheese Cake
Milk — Coffee

To make the pale rose, frosty soup: Combine one can condensed tomato soup, ½ soup can coffee cream, and ½ soup can of milk. Have ingredients well chilled. Beat until smooth.

Garnish with chopped chives, green onion tops or parsley. Serve very cold.

Double-Decker Salmon Loaf

Salmon Layer:

1 envelope unflavored gelatin
1¼ cups cold water
1 cup chopped celery
One 7¾ ounce can salmon
1 tablespoon grated onion
½ cup sharp mayonnaise
1 tablespoon prepared mustard

Consomme Layer:

1 envelope unflavored gelatin
½ cup cold water
1 can condensed consomme
2 tablespoons lemon juice
few dashes tobasco

Salmon layer: Soften gelatin in ¼ cup cold water for 5 minutes. Heat remaining water to boiling, pour on gelatin, stir until dissolved. Cool.

Add celery, flaked salmon, onion, mayonnaise and mustard. Season with salt, if needed. Mix well, pour into loaf pan. Chill. When almost firm, begin second layer.

Consomme layer: Soften gelatin in cold water for 5 minutes. Add hot consomme and stir until dissolved. Add lemon juice and tobasco. Cool.

Pour over salmon mixture. Chill until firm. Unmold on platter on salad greens. Garnish with cold shrimp. Serves 6 to 8.

(Note: Tuna may be substituted for salmon.)

Pineapple Chiffon Cheese Cake

(Joyous—No baking)

1 envelope unflavored gelatin
¼ cup cold water
¼ cup sugar
1 can (#2) crushed pineapple
2 eggs
1 cup cottage cheese
1 teaspoon grated lemon rind
2 teaspoons lemon juice
⅛ teaspoon salt
½ cup whipping cream
1 cup zwieback crumbs
¼ cup melted butter or margarine

Soften gelatin in water for 5 minutes.

Mix ¼ cup sugar and ½ cup syrup drained from pineapple with slightly beaten egg yolks. Cook over hot water until thickened, stirring constantly. Add gelatin, stir until dissolved.

Add pineapple, sieved cottage cheese, rind and juice. Fold in stiffly beaten egg whites, salt and whipped cream.

Combine crumbs, ¼ cup sugar and butter. Line bottom of 8-inch square pan, saving ⅓ cup mixture for top. Fill with cheese mixture and sprinkle top with remaining crumbs. Chill several hours until firm. Serves 9.

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Successful Sewing Guide

By ELIZABETH DICKENSON

FALL FABRICS are tempting the home seamstress. Here are some reminders for successful sewing.

Use fine needles and pins with sharp smooth points. If the fabric pin-marks badly, use weights to hold the paper pattern in place during the cutting.

Scissors must be sharp and used with care, since it is easy to cut too far. If the fabric has a tendency to ravel, leave a generous seam allowance.

Test the sewing machine stitching on a double piece of the new material. Use a fine machine needle, size 9 on semi-sheers and size 11 on heavier materials. Be prepared to change the needle as the toughness of some man-made fibers dulls it.

A sewing thread that has approximately the same qualities as the fabric to be stitched is generally most successful. On nylon, orlon, acrilan or dacron use nylon or dacron thread preferably, although mercerized cotton or silk may be used.

Nylon Thread

Loosen the tension and lengthen the stitch for nylon or dacron thread. For more elasticity of seams on man-made fibers, and to prevent puckering, stretch the seams gently while stitching. Use a moderate rate of speed, since rapid stitching may cause puckering or skipping of stitches. When filling the bobbin with nylon or dacron thread, wind loosely without any tension.

In sewing pieces together, stitch from the wider part to the narrow; for example, from hem to waist in the skirt, from armhole to waistline in the blouse and from neckline to shoulder.

Select the seam finish according to the fabric: on firmly woven materials, use pinking or edge-stitching; on medium weight fabrics, use generous seam allowances and overcast the edges, or turn the edges under and stitch them; on sheer fabrics, use French or false-French seams.

"For all the company you are, I might as well be talking to a fence post."

Plentiful Foods for August

Peaches head the plentiful foods list for August, according to the Food Distribution Division of the USDA's Agricultural Marketing Service.

Other items on the August plentiful foods list are watermelon, potatoes, fresh and processed lemons, summer vegetables, and vegetable fats and oils.

SHORT CUTS

A $1 check will be paid for each short cut printed.

• • •

From a self-styled "old bachelor:" when making lemonade, put required amount of sugar into juice, seeds will rise to top immediately and can be quickly scooped off. *E. B., St. Petersburg, Fla.*

• • •

Hard water scum on bathroom tile and tub? Try the old time trick of a flannel cloth dipped into kerosene or fuel oil. Scum vanishes without harsh scouring. Rinse off with hot water and washing soda. Tile will gleam. Another hint: wipe soiled candles with a cloth moistened with rubbing alcohol. They'll clean up magically. *Mrs. M. D., Sarasota, Fla.*

• • •

Taking weiners on a picnic? Place them in a thermos jug filled with boiling water. They'll be ready to eat without re-cooking or re-heating. *Mrs. L. Y., North Miami, Fla.*

• • •

Save old nylon stockings to use in the vegetable and flower garden. Cut into long strips, they make strong but soft material for tying up tender plants. *Mrs. V. B. R., Westbrook, Maine.*

Youth Has Its Say

"WHO'S YOUR favorite comic strip character?", was this month's Youth Has Its Say contest query. Two young artists and a 17-year-old wizard with words won $5 prizes for their vivid answers to this question.

Mickey Mouse

Submitting a brightly colored drawing, 13-year-old Benjamin Edwards of Wellborn, Florida stated:

"This is Mickey Mouse. He is my favorite. I like him because he's fun to read in comic strips and books, and fun to watch on TV."

Beetle Bailey

Words were used most effectively by Eugene Douglas of High Springs, Florida. He wrote:

"*Dear Editor:*

Beetle Bailey has my funnybone permanently under his thumb; he is the most and the must of comic strips. If I read anything, I read Beetle; I have to know what pickle Mort Walker's lazy, long-haired Bailey and his sidekick are sleeping through.

Incidents in this comic strip are easily applied to a civilian life such as mine. So when Beetle strokes my nose with his feather, I laugh—and I think.

Beetle is to me more or less what a war picture is to a war-worshipping kid who has to be satisfied in merely watching it on the screen. Since pranking, goldbricking and similar misdemeanors have a tendency to blow up in my face, I'm content to chuckle at the innocent rascal who can do it all without even breathing hard—Beetle Bailey."

WHICH ONE'S MOST USEFUL?

We've gone a long way since man invented the wheel. An impressive variety of implements and vehicles make agriculture easier today.

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We'll pay $5 for your letter on this subject if the judges select it for publication in our October issue. Write not more than 250 words and address your letter to:

Youth Has Its Say
FLORIDA GROWER & RANCHER
P. O. Box 2350
Tampa, Fla.

Entrants must be between the ages of 10 and 21.

Nancy

Maryanne Manos, a Miami 14-year-old, was our third winner. She submitted this pen-and-ink drawing of Nancy.

A working girl is one who quit her job to get married.

A pessimist is the type of person who prays for rain but won't buy an umbrella.

Exclamation point: A period that has blown its top.

Citrus Growers Program

"AMERICA'S number one speaker" and outstanding industry figures will highlight the Silver Anniversary program of the popular Citrus Growers Institute.

Slated for the week of August 11-15, the Institute will be held at Camp McQuarrie, near Astor Park, in the Ocala National Forest. Reservations for free lodgings should be addressed to: Lake County Agricultural Agent R. E. Norris, Institute manager, Box 1165, Tavares.

Overnight guests should bring their own bed linens and toilet articles. Meals will be served at the camp at a nominal cost.

Registration will begin at 2 P.M. on Monday, August 11. Daily sessions will be held Tuesday through Thursday from 8:30 A.M. until noon, and from 1:30 to 4 P.M.

Program topics and the speakers are listed below:

Tuesday Morning

"Opening Remarks"—Dr. M. O. Watkins, director, Florida Agricultural Extension Service.

"Twenty-Five Years of the Citrus Institute"—R. E. Norris.

"The Outlook for the 1958-59 Citrus Season"—Dr. H. G. Hamilton, head, Department of Agricultural Economics, University of Florida.

"Trends in the Fresh Fruit Industry"—R. V. Phillips, manager, Haines City Citrus Growers Association.

"Trends in the Processing Industry"—Marvin Walker, general manager, Florida Citrus Canners Cooperative.

Tuesday Afternoon

Address by Dr. Kenneth McFarland (often called "America's number one speaker"), Educational Consultant, General Motors Corporation.

"What Are Nucellar Seedlings?"—Dr. A. P. Pieringer, assistant horticulturist, Lake Alfred Citrus Experiment Station.

"Virus Diseases and their Effect upon Florida Citrus"—Dr. L. C. Cochran, horticulturist, USDA, Orlando.

"Five Years of Budwood Certification"—Gerald Norman, in charge, Budwood Certification Program, State Plant Board.

Wednesday Morning

"Citrus Production Management Problems"—Jack T. McCown, assistant Extension citriculturist.

"Some Suggestions for Handling Cold-Injured Citrus Trees this Fall and Winter"—Fred P. Lawrence, Extension citriculturist.

Address: John M. Fox, president, Minute Maid Corporation.

"Plans of the Florida Citrus Commission for the Coming Season"—Key Scales Jr.

Wednesday Afternoon

"A History of the Florida Citrus Industry"—Randall Chase, Chase & Co., Sanford.

"A Review of the Trends in Citrus Fertilization for the Past 25 Years"—Dr. Paul F. Smith, plant physiologist, USDA, Orlando.

"State Plant Board Programs and Regulations that Affect the Citrus Grower"—Dr. C. W. Cowperthwaite, Plant Commissioner.

"Optimum, Deficiency and Toxicity Levels of Plant Nutrients"—Dr. O. C. Bryan, technical director, Soil Science Foundation.

Thursday Morning

"The Research Picture of the Burrowing Nematode as of Today"—Dr. R. F. Suit, plant pathologist, Citrus Experiment Station.

"Citrus Mutual's Plans for the 1958-59 Season"—Vernon Connor, president.

"Quality in Citrus and Selling It on Pounds Solids"—Dr. Paul L. Harding, plant physiologist, USDA.

"Rootstocks and Varieties"—William H. Mathews, assistant horticulturist, Agricultural Extension Service.

Thursday Afternoon

Address: Willard M. Fifield, Provost for Agriculture, University of Florida.

"Pest Control"—W. L. Thompson, entomologist, Citrus Experiment Station.

"Irrigation and Weather Conditions"—Dr. John Sites, head, Fruit Crops Section, University of Florida.

"Fertilization"—Dr. E. J. Deszyck, associate horticulturist, Citrus Experiment Station.

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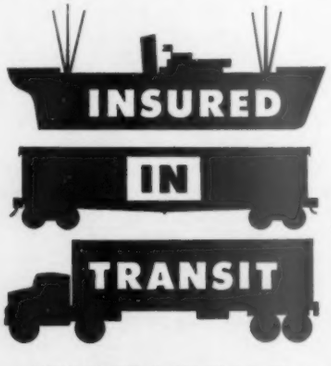

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New Pascal Celery Variety Is Resistant to Blackheart

HIGHLY RESISTANT to early blight is Emerald, a new pascal celery variety for Florida farmers.

Limited quantities of the seed will be commercially available following the harvest of the 1958 seed crop. Everglades Experiment Station associate horticulturist E. A. Wolf reports the following facts about the new variety:

Emerald originated from a cross between hollow Turkish celeriac and Cornell 19, a golden variety, crossed with Abbott and Cobbs Improved Pascal. It was produced from selected plants of the B56-148 line, which was widely tested in Florida during the 1957-58 season.

It is more tolerant of the high temperatures of late May and June than other varieties observed in the Everglades area. It has shown considerable resistance to blackheart.

The new variety appears to be slightly more brittle than summer pascal varieties. And under some conditions, it has exhibited much more node cracking than summer pascal and Utah 52-70 varieties.

Emerald is more susceptible to premature seeding from exposure to prolonged cold than the summer pascal varieties. But it will not bolt as easily as Utah 52-70, unless exposed to prolonged periods of temperatures below 60 degrees.

Plant uniformity is considered satisfactory from a commercial standpoint, Wolf reports.

However there is considerable variation in color, plant height and rib length. Thus, seedsmen and growers may develop strains of Emerald which will be more uniform and suited to special preference.

* * *

Heuck, County Agent for 30 Years, Retires

Carl P. Heuck, Lee County Agricultural Agent, recently retired after spending half his lifetime in Florida agricultural extension work.

Aged 60, Heuck is a native of Davenport, Iowa. He started his career in agriculture by serving as DeSoto County Agent two years, followed by six years in Martin County. He served as Lee County Agent 22 years.

J. F. Barco has been transferred from Hardee County to succeed Heuck. The later has made no definite plans for the future but will remain in Fort Myers.

FLORIDA-MANUFACTURED wind machines for frost protection are in the offing. Florida Division of Food Machinery and Chemical Corporation at Lakeland has entered into an agreement with National Frost Protection Co., Inc., of Burbank, California to manufacture and sell "Tropic Breeze" wind machines in this state.

Before entering into the agreement, FMC's engineering and research department conducted an investigation of all available makes of wind machines. They rated the "Tropic Breeze" as the finest of its type on the market today.

Shown discussing sales plans for the introduction of "Tropic Breeze" wind machines in Florida are, from left: E. T. Tourjee, FMC general sales manager; L. I. DeWitt, assistant to Tourjee; H. Fowler, assistant to the president, National Frost Protection Co., and W. Belk, chief engineer.

A full report of Federal-State Frost Warning Service tests involving wind machines has been printed in booklet form. Free copies may be obtained by writing Food Machinery and Chemical Corporation, Florida Division, Department A, Lakeland, Florida.

Insects in the United States nullify the labor of at least one million working men each year.

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CITRUS TREES—Make reservations now for coming season's planting. Ocklawaha Nurseries, Lake Jem, Florida.

SUPERIOR CITRUS TREES—Guaranteed no freeze damage. Nursery inspection invited. Most varieties available for Fall 1958 and Spring 1959 planting. For quotations call GLendale 2-7541, or write WARD'S NURSERY, INC., Box 846, Avon Park, Fla.

QUALITY CITRUS TREES—Selected buds on rough lemon and sour orange rootstocks. Limited supply ready for immediate planting. Orders now being taken for June and Fall planting. For information call CYpress 3-5700 or write Johnston's Citrus Nursery, Box 811, Winter Haven, Fla.

Temple and Pineapple Orange trees, White seedless grapefruit and Seminole Tangelos on sour—1¼" to 1½" in diameter, balled. VIELE GROVES, Route #1, Box 705 (Davie), Ft. Lauderdale, Florida, Phone Ludlow 3-3449.

SEEDS — PLANTS

PENSACOLA BAHIA GRASS, EARLY HAIRY INDIGO, and ALYCE CLOVER. All high quality, new crop. Available now. Write for prices. GRAND ISLAND NURSERIES, P. O. Box 906, Eustis, Florida.

AMAZING NEW HYBRID Everbearing Strawberry, Ozark Beauty. Produces first year. Originator—Winn's Berry Farms, West Fork, Arkansas.

CACTI-SUCCULENTS, named assortment, 10 for $2.00. Price List 10¢. FELDMAN'S, Dept. R, 1707 Robindale, West Covina, Calif.

Papaya seeds from thick meated, flavor unsurpassed, 5 to 15 lb. bi-sexual, self-pollinating, pecan shaped fruit, 60 seeds 50¢. Late papaya bulletin with ea. order. Minimum order 50¢. H. K. Rose, 1149 NW 24th St., Miami, Florida.

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400 acres, four houses, 60 cow barn, two miles from Culpeper $110,000. 576 acres, barn, tenant house $35,000. 1,000 acres, ten room house outbuildings and lake $40,000, terms. Virginia has wonderful climate, excellent markets. OLSON and DURHAM, Rapidan, Virginia.

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Septic Tanks need the Anaerbic and Aerobic Bacteria found in Sept-O-Zyme. Used by thousands of satisfied customers in Florida. Write BOX 1544, Casselberry, Florida.

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ANT FARM, educational, entertaining, unbreakable, clear plastic. Price, $2.75 postpaid. Feldmans 1707 W. Robindale, West Covina, California.

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Farm Manager, 33, Veteran, Agricultural College Degree, M.S. University of Florida. 10 years experience on my own Dairy Farm. Experienced with dairy & beef cattle, available after Sept. 1. Donald Buschman, Hillsdale, N. Y.

J. P. Harllee, Jr. of Palmetto, a vegetable grower and member of the board of directors, will be general chairman of the Florida Fruit and Vegetable Association's 15th annual convention this year.

Harllee's appointment was announced by Roy Vandegrift, Jr. of Pahokee, FFVA president. The convention will be held September 24-26 at Hotel Fontainebleau, Miami Beach.

Mrs. J. P. Harllee, Jr. has been named chairman of Ladies' Activities for the second year.

Good Plans for GOOD BUILDING

By T. C. SKINNER Extension Agricultural Engineer
Florida Agricultural Extension Service

Cattle Stock's Value Proven

CATTLE STOCKS are important equipment on farms and ranches. They are especially important where valuable purebred animals are concerned.

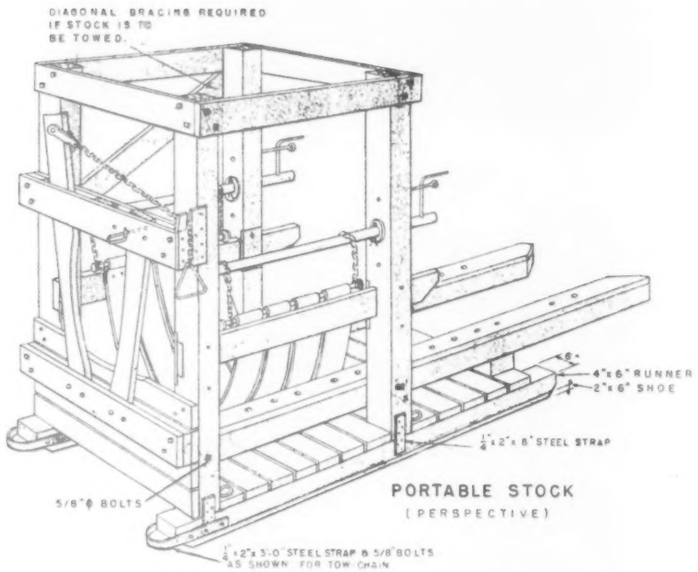
Many cattlemen, I'm sure, have had experiences where a valuable animal has been seriously injured—or possibly even killed—because proper facilities were not available to immobilize the animal while he was being treated.

The use of such equipment in trimming hoofs and horns, or in vaccinating or treating cattle, reduces the chances of injuries. And it requires less labor for each job.

Compared to the loss that can result from injury to just one high-priced animal, the cost of constructing a good cattle stock is small. Moreover, the job of handling the animal can be done much easier with less help.

Shown here is a cattle stock which may be constructed as a portable or stationary unit, according to need. Developed by specialists of the University of Florida Agricultural Extension Service and Experiment Station, it has been widely distributed to other states through the USDA Plan Exchange Service.

Plans for the cattle stock shown here may be obtained through your county agent by writing to: The Agricultural Engineer, Agricultural Extension Service, University of Florida, Gainesville.


DIAGONAL BRACING REQUIRED IF STOCK IS TO BE TOWED.
4"x6" RUNNER
2"x6" SHOE
1/4"x2"x 8' STEEL STRAP
5/8"ø BOLTS
PORTABLE STOCK
(PERSPECTIVE)
1/4"x2"x 3'-0" STEEL STRAP & 5/8" BOLTS AS SHOWN FOR TOW CHAIN

Cattle Stocks Prevent Injury, Save Money

Increase Yields By Proper Fertilization

EXPERIENCE has shown that one of the easiest and most economical ways to increase yields is by proper fertilization.

Now, every Florida farmer knows the importance of fertilizer. But he may not know what his county agent or soil scientist is able to discover through a soil test.

"Proper" fertilization is no hit-or-miss thing. W. L. Prichett, Agricultural Experiment Station soil technologist, declares:

"This involves testing of the soil to see what plant foods are already present, determining the amount of plant food it will take to produce that higher yield, and supplying the difference between what the soil can furnish and what crops need by fertilization at plant time or by side-dressing."

With little effort, the farmer can get an exact prescription which shows the fertilizer and lime needs of every field on his farm—regardless of the crop grown.

By following these scientific recommendations, growers can earn more money. Without fertilizer, there would be no profits.

Cost of fertilizer per extra unit in an experiment with corn was 44 cents a bushel. But the possible profit amounted to $30.21 per acre.

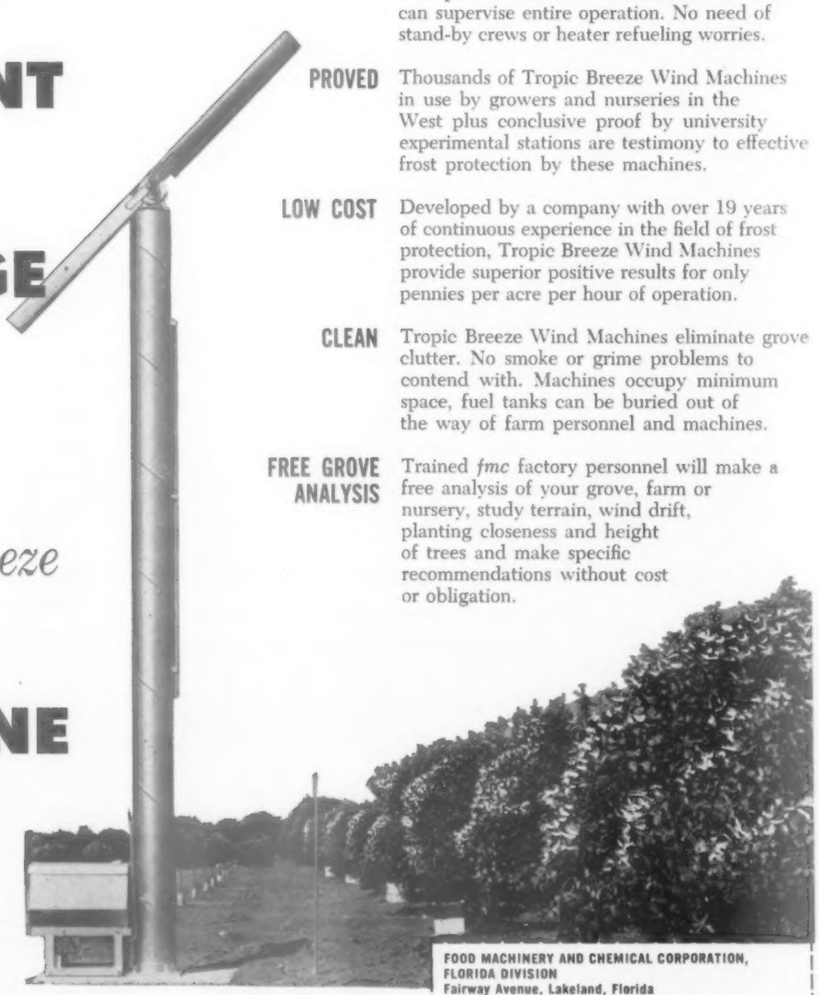
On cotton, the cost per extra pound of lint was only four cents. The possible extra profit per acre was $58.86.

Peanuts, oats, soybeans and pasture showed similar possibilities.

* * *

If a man makes a better mousetrap, the Internal Revenue Service will beat a path to his door.

NOW PREVENT FROST DAMAGE *with the* **FMC** *Tropic Breeze* **WIND MACHINE**



FAST Tropic Breeze Wind Machines whirl into action at the flip of a switch. Provide wide area frost protection in 3 to 5 minutes. One man can supervise entire operation. No need of stand-by crews or heater refueling worries.

PROVED Thousands of Tropic Breeze Wind Machines in use by growers and nurseries in the West plus conclusive proof by university experimental stations are testimony to effective frost protection by these machines.

LOW COST Developed by a company with over 19 years of continuous experience in the field of frost protection, Tropic Breeze Wind Machines provide superior positive results for only pennies per acre per hour of operation.

CLEAN Tropic Breeze Wind Machines eliminate grove clutter. No smoke or grime problems to contend with. Machines occupy minimum space, fuel tanks can be buried out of the way of farm personnel and machines.

FREE GROVE ANALYSIS Trained *fmc* factory personnel will make a free analysis of your grove, farm or nursery, study terrain, wind drift, planting closeness and height of trees and make specific recommendations without cost or obligation.

ACT NOW!
Anticipated orders will place heavy demand on factory production. Your immediate action is urged to insure delivery and installation before frost periods begin.

Putting Ideas to Work

FOOD MACHINERY AND CHEMICAL CORPORATION
Florida Division
General Sales Office—LAKELAND, FLORIDA
Plants: LAKELAND, FLORIDA—WOODSTOCK, VIRGINIA

FOOD MACHINERY AND CHEMICAL CORPORATION, FLORIDA DIVISION
Fairway Avenue, Lakeland, Florida
Please send me sales literature on Tropic Breeze Wind Machines.
Please have Sales Engineer contact me,
Company_____
Name_____
Title_____
Address (RFD)_____
City_____ Zone____ State_____

Citrus CLOSE-UPS

By FRED P. LAWRENCE
Citriculturist
Florida Agricultural Extension Service

Recovery Slow in Spots At this point, we are somewhat surprised at the extensive die-back in those citrus groves damaged by last winter's cold.

Based on reading research and past experience, it was apparent that some dying back would be experienced. And growers were warned against early pruning.

However, at that time, we could not foresee that die-back would be widespread and—in some cases— so intensive as is the case.

With the exception of very young trees, many groves which have already been pruned will have to be re-pruned – especially those that were pruned early in the year.

Observing the slow recovery of some of the older trees which were severely damaged, it seems logical that the pruning of these trees should be put off until next spring.

Growers should bear in mind that late pruning may lead to additional damage this winter. The removal of heavy wood or extensive pruning *should not be practiced beyond September 1.*

Citrus Prospects On the optimistic side—observing those groves not severely damaged by cold—the prospects are excellent.

Fruit is sizing well, trees are loaded, and—in spite of heavy melanose and insect infestation—the fruit is clean. Florida growers, in general, have been "on the ball" with their cultural practices.

Market demand has been unusually strong this spring and summer. More crops have been sold earlier and at better prices than in many years. With a decreased crop in prospect, it is believed both demand and prices will remain strong.

A New Citrus Organization It now appears that by the time this article reaches the printer, the producers of citrus nursery trees will have organized themselves into a Citrus Nurserymen's Association.

Some 45 nurserymen and workers from the Agricultural Extension Service and State Plant Board met in Winter Haven on June 30 to discuss the need for such an organization. At this meeting it was decided that the organization would be of untold value in improving nursery practices, which would lead to the production of better citrus trees . . . as well as other mutual benefits.

Franklin Ward of Avon Park was elected temporary chairman. The group then proceeded to name a committee of 11 nurserymen to study and formulate a set of by-laws.

Election of officers was to be held and final plans made on July 24 in Winter Haven. All producers of citrus nursery trees are invited to affiliate with the group.

Piercing Moth Attacks Oranges During the past two years, late-maturing oranges in the southern Indian River area have been pierced by an adult moth, *Gonodonta nutrix* (Cramer). Dr. John King of our Indian River Citrus Laboratory discovered the moth and its feeding habits after exhaustive study.

The injury is one or more (often a dozen or more) holes bored into the fruit; holes are so small they are not readily seen. Once the fruit is punctured, the fruit piercing moth and members of other non-piercing species of moths insert their straw-like mouthparts and feed on the orange juice.

Usually, the first signs the grower has is an unusually heavy dropping of mature oranges.

No chemical control measures have been worked out. But since the primary host plant of this particular moth is in the pond apple, *Annona glabra*, which grows wild along canal banks, it is felt that possibly eradication of the plant would effectively control the pest.

Cobalt Irradiator The University of Florida Agricultural Experiment Station has installed a cobalt-60 gamma irradiation facility. The largest agricultural irradiation unit in the country, it will be used by all branches of agriculture for such research projects as producing new varieties and improved methods of food preservation.

Nationally Known Speaker In addition to the well-known and outstanding industry figures who will appear on the Silver Anniversary Program at the Camp McQuarrie Citrus Institute, a featured speaker will be Dr. Kenneth McFarland of Topeka, Kansas. The educational consultant of General Motors Corporation, Dr. McFarland is widely acclaimed as one of the nation's top speaker.

Don't miss the opportunity to hear on Tuesday's program, August 12, at 1:30 P.M.

Horticultural Society Changes Dates The executive committee of the State Horticultural Society has been forced to change the annual meeting dates to October 29, 30 and 31. The Fort Harrison Hotel, in Clearwater, is still the site of the meeting.

New Publications *Citrus Color Guide:* The printer promised July delivery of this 200-page book which contains 117 four-color plates illustrating the various insects, diseases and nutritional disorders of citrus. The plates and descriptions will enable growers—even those not familiar with citrus—to identify the enemies easily and with a high degree of certainty.

It is our personal belief that this book is a MUST for all citrus growers and that it is a bargain at $4 per copy. Send a check or money order to: Editor, Agricultural Experiment Station, Gainesville, Florida.

Bulletin 591 is finally off the press and available free of charge to all Florida residents. This is the new bulletin entitled "Insects and Mites Found on Florida Citrus."

Circular 185, "Selecting a Grove Site," is a 4 x 8-inch "fold-out" circular which offers criteria on which to base the selection of a planting site for a new citrus grove.

How smart are you?

(*Answers to Questions on Page 4*)

1. *From noon until noon when the sun crosses the meridian.*
2. *Tree animals.*
3. *No, early in life it attaches itself to some object.*
4. *Sun worship.*
5. *In India.*
6. *A share of stock represents ownership; a bond, indebtedness.*
7. *Yes.*
8. *Ultra-violet rays.*
9. *A council.*
10. *With the ends pointing down.*

* * *

Fresh Frozen Lychee Fruit

LYCHEE FRUIT in fresh frozen form will soon be available for the first time.

John K. Rice of Clermont, president of the Florida Lychee Growers Association, made this announcement last month. Minute Maid, Inc. will do the packing at its Auburndale plant on contract for the association.

Hitherto, commercial use of the fruit has been limited. This is because the regular season for picking lychees covers only about six weeks in June and July.

But with the freezing of lychees, this fruit—a delicacy in great demand by Chinese throughout the U. S.— will be available fresh throughout the year.

Despite freezing weather last winter, this year's Florida lychee crop totals a record 45,000 pounds. The previous high was 27,000 pounds.

SAVE...your season's PROFITS! Protect against frost...

with **RIVERSIDE HEATERS**

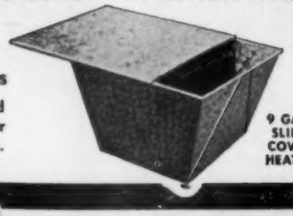
Riverside heaters have saved crops in the most severe freezes on record. That's why YOU should protect your crop against frost loss or damage with RIVERSIDE'S PROVEN heaters . . . the favorite of Citrus Growers for over 45 years.

PROVEN PROTECTION—AT LOWEST COST

RIVERSIDE LOUVRE HEATER

Square Pan Has Many Advantages

Made from one piece of Prime Galvanized Steel - No Seams - No Weak Spots - Longer Life - Simple in Design - Easy to Operate.



9 GAL. SLIDE COVER HEATER

RESIDENT REPRESENTATIVE
CHESTER T. JACKSON
Rt. 3, Box 260 — Phone Garden 2-1220
Orlando, Florida

NATIONAL-RIVERSIDE CO.
3120 Fifth St. Riverside, Calif.

NEW... **HALE**
"TRACTOR-MATE" PTO Irrigation Pump

Get FULL Benefit from your Tractor with a HALE "TRACTOR-MATE"—the new Hale Type 3PTF power take-off Trailer-mounted pump.

"TRACTOR-MATE" is specifically designed for use with your tractor power in irrigating medium size acreage. You can also use it as a booster for your present Irrigation System!

The 3PTF, with a wide range of volume and pressure, is compact, efficient and economical to operate.

2 models available. 3" suction. With 550 RPM take off speed, it will pump 350 GPM at 80 PSI.

Ask about the New

HALE *"Torrent"*
Self-Priming Portables

Quality-built, quick-starting, low-cost—the "Pump of a Thousand Uses." Ideal for "on-the-spot" filling of tanks with water, liquid fertilizer—also for small irrigation jobs, standby water system and emergency fire fighting. Pumps over 7000 gallons per hour!

- HALE Irrigation Pumping Units are sold thru Distributors who are well qualified to Engineer a system best suited to YOUR needs.

Please send information for your 3PTF, Torrent, and other irrigation pumps.
Name .....
Address .....
Water Source ..... No. Acres .....
IRRIGATION DIVISION—DEPT. FG

HALE FIRE PUMP CO.
CONSHOHOCKEN, PA.

FARM MANAGER Ralph Bornman loads eggs into mechanical washer. UPPER LEFT: Walter Glidewell collects eggs from both sides as he rides down the rows of cages.

Mechanized Poultry Farming

COMPLETELY streamlined is the Winter Garden cage operation known as Poultry Products, Incorporated.

Here are found mechanized labor-saving devices of interest to the entire poultry industry. Here two men—with the aid of their machinery "helpers"—daily tend 11,000 birds and process some 15 crates of eggs.

Slightly over a year old, the operation is owned by Newton D. Rich. Ralph L. Bornman, a veteran Virginia poultryman with four years' experience on Florida farms, was recently named poultry unit manager after having worked there as a helper for several months.

Basically, the Poultry Products farm is similar to most other Florida cage operations.

Ventilation is provided by air vents in the aluminum roofs. A two-story structure houses the feed, cooler and egg rooms.

All other buildings are 14 feet wide. Each has one double and two single rows of cages.

However here the similarity ends. Between each row of cages is a 30-inch wide concrete slab, a solid foundation for the three-wheel electric cart which actually makes the operation unique.

The multiple-purpose, battery-powered cart enables one man to gather eggs from 11,000 birds, to record the data, and to unload the eggs twice a day—within less than four hours' time inclusive.

Operated by foot controls, the cart guides itself by the aid of two front antenna-like arms which roll along the feed troughs. It also has a manual control for guiding when not between the cages.

The machine enables a single person to feed the entire flock within 45 minutes. "But," reports Bornman, "we like to do a bang-up good job so we allow an hour for feeding."

Feed is distributed in the troughs by means of an elongated V-type container with top and bottom open. The lower end of the container is cut sufficiently high to leave a desired level—but not an excessive amount—of feed.

A mechanical washer cuts time in the egg room to a minimum. Two operators can process between 12 and 15 cases an hour; one person, about half that amount.

Holding six eggs at a time, mechanical fingers load the eggs onto the machine assembly line where they are rotated as they are washed. When the eggs are clean, they are rolled over onto a conveyor which carries them over a hot air blast for drying.

Other mechanical devices include electric water controls and separate light controls.

Already, the new poultry operation is in the process of expansion. In the making is a new brood building with 5,000 square feet of floor space to house young chicks.

among all nationally sold chicks:

K-137 KimberCHIKS®
RANKED FIRST
IN NET INCOME
in these 1956-57 tests

Rank based on income over feed cost (except in N.Y.C. and Mo.)

Entry	Calif.	Mo. "B" ‡	N.Y.C. ‡	Tenn.	Utah*	Ave. Rank
Kimber K-137	4	4	6	5	2	**4.2**
Strain A	3	10	—	10	1	**6.0**
Strain B	11	16	2	3.5†	4	**7.3**
Strain C	5	18	18	12	5	**11.6**
Strain D	—	6	24	—	10	**13.3**
Strain E	38	3	25	15	3	**16.8**
Strain F	23	20	—	7	18	**17.0**
Strain G	—	25	27	11	13	**19.0**

*Incomplete. †Average of 2 entries. ‡Income over feed and chick costs.

K-137 Kimberchiks were entered in five Random Sample Laying Tests last year that report income figures. The above table shows how the K-137 outranked all nationally sold chicks entered in at least three of these tests. Kimberchiks earned 56¢ more per chick than the average of all entries in these tests. If you like *consistent, profitable performance* let us book your order now for K-137 Kimberchiks.

WE ALSO HAVE STARTED PULLETS
BLOOMINGDALE POULTRY FARM & HATCHERY
Rt. 1, Box 374 Valrico, Fla.
Tel. Tampa 49-3054 - 49-1033

DEKALB CHIX

These "BRED-IN" Qualities make DeKalb "Profit-Pullets"

LIVABILITY–In order to Lay and Pay, a layer must have good livability. Careful, selective breeding gives you this in the DeKalb Chix.

LAYABILITY–The number of eggs a hen can lay is also largely determined by the breeding. Lots of big, "in demand" white eggs mark the DeKalb hen.

FEED CONVERSION–DeKalb hens eat heartily, but when you figure pounds of feed in relation to number of eggs laid, you're in for a pleasant surprise.

EGG QUALITY–Practically no objectionable spots in DeKalb eggs . . . and, the quality of the yolk, albumen and shell . . . tops. DeKalb eggs are in demand.

SUPERB LAYERS for FARM FLOCKS CAGES FLOOR FLOCKS

YOUR DEKALB CHIX WILL BE HATCHED & SERVICED BY:
Henry F. Smith Farm & Hatchery, Hilliard
Fla. Hen Ranch, Ft. Lauderdale
Tri-States Hatcheries, Inc., Graceville
Brandenburg Hatchery, Dunedin
Rodriguez-Brandenburg Hatchery, Havana, Cuba
Check-R-Board, Palatka

DEKALB AGRICULTURAL ASSOCIATION, INC., DEKALB, ILLINOIS
Commercial Producers & Distributors of DeKalb Seed Corn, DeKalb Chix and DeKalb Hybrid Sorghum.

IF YOU KEEP RECORDS, YOU'LL KEEP **DEKALB CHIX**

Editorial Comment

Of 'Rights' and Freedom

AMERICA is breeding a peculiar crop of "rightists." These are people who think they have a good many more rights than the framers of the Constitution happened to think of.

For instance, there is a man in Miami who thinks he's got a "right" to play on a private golf course . . . even though he isn't a member of the club. And there are union bosses in Detroit who think laborers have a "right" to the profits in the auto business in addition to their wages.

Nearly everywhere, there is someone seeking a "right." This seems to be in keeping with the popular cry that "everybody is equal."

The fact is, everybody is **not** equal—neither mentally, physically, financially, or socially—and never will be.

But the people who cry for their "rights" are those who want the right without earning the privilege. If we can't earn acceptance, we will never gain acceptance—and that's that.

A "rightist," strangely enough, is usually one who pushes against the democratic system. He fights the sanctity of the freedom of choice. For if a man thinks he is entitled to everything then, by the same token, everyone else is denied the freedom of choice.

The Harvard Club is unlikely to permit bums off the street to drop in for a drink. Neither are the members of the medical society likely to admit quacks to keep from hurting their feelings. The members of a private golf club aren't going to let everybody in town play on their course. And the owners of the auto industry aren't going to give their profits to anyone but Uncle Sam.

The "rightist" is usually a "wrongist." He seeks—without pay or toil—that which others have worked for and earned. He makes no attempt to base his claim on his individual merits, but rather on the so-called "people's rights" which he usually argues are guaranteed to him.

There are only a few basic freedoms or "rights" in our Constitution. There is nothing there that says one citizen has to accept another as a business, intellectual or social equal.

And that is just what has made this country great. Our founding fathers were smart enough to see that one man must not be tied to another, regardless of choice.

The denial of a choice is much more dangerous than the granting of a right.

Nature Lore and Legend

By Ruby Allgood Paris

Now, who would dare to hang the rubber plant on to the family tree of the fig?

But, hold on to your hats—for that is exactly what I'm doing. And for the very good reason that I've found it is the proper place for the ubiquitous plant and others of its relatives.

Whether we study the heraldry of human history or the flora and fauna of planet earth, we find relatives and in-laws. The fig tree is no exception to this general rule.

In itself, the *F. Carica* furnishes delicious and edible fruit and was well-known for this in eastern Biblical lands thousands of years ago. Indeed, aside from the Biblical mention of the Tree of Knowledge of Good and Evil, the fig is the first tree mentioned in the Old Testament.

The fig's naturalization of the Holy Land is so old we have no record of it. Jesus often used fig trees in His parables and once performed a miracle on a fig tree that had ceased bearing.

Figs were frequently used in a medicinal manner by the kings. One record of King Hezekiah tells us that as he lay at death's door, Isaiah came to him and prescribed a poultice of figs. Upon its application, Hezekiah became a well man.

Moreover, the eastern lands depended upon the fruit of the fig for the sustenance of life itself. It was eaten fresh and carried on journeys as dried food. It also had a trade value in eastern markets.

Botanists call the relative of the fig (*F. Pandurata* or fiddle-shaped leaf), the *F. Lyrata*. An ornamental plant and one of Florida's shipping crops, it may be bought from flower shops across the country.

Another relative is the creeping fig (*F. Pumila*), an ornamental plant that is useful as a trailing basket plant or as a climber. One outstanding trait of this variety is its ability to stand up under freezing weather.

Long has the fig tree been the victim of superstition. In Sicily, it is often covered by Penny Royal (sometimes called Engligh-run-by-the-ground) to counteract the evil eye and to prevent the fruit from falling off. This practice may have some real value as the herb may drive away harmful insect enemies of the fig tree.

And another herb lore practice is "to plant Rue by the fig tree is best."

The use of figs for culinary purposes has given the fig newtons and other named cakes and candies. But, to my mind, there is nothing better than fig preserves cooked with Florida lemon slices.

Farm Health

Authentic health information for farm families, prepared through the cooperation of the Council on Rural Health, American Medical Association, and the Florida Medical Association.

Varicose Veins

VARICOSE VEINS — swollen, contorted, unsightly and often painful blood vessels—are a fairly common problem among adults.

Although they can occur in any part of the body, most commonly this is a problem of the veins of the legs.

When varicosity occurs, it indicates there is some sort of obstruction to the normal flow of blood. Blood is "stagnating," so to speak, under pressure and causing the vessels to enlarge, to twist in their course and hurt

One or a combination of the following factors probably exists:

Congenital weakness of the vein wall, occupations which require prolonged standing, pressures during childbirth, vein inflammation leading to valve damage, or chronic disease of the vein walls.

Many cases of varicose veins are readily apparent to the patient himself. The tortured twisting of the veins, their swelling and the pain they cause—particularly after standing or walking—are easily observed.

Sometimes however, when deep veins or communicating veins are involved, there is only a deep ache to indicate that something is wrong.

Elastic stockings may control the condition in very mild cases. But close medical supervision and frequent re-examinations are necessary to guard against progress of varicosity into more serious stages.

However treatment of more advanced varicose conditions may involve one or more of the following:

Injection of solutions which in effect "harden" the vein walls and thus strengthen them, surgical tying-off of sections of varicosed vein, or removal by several different means of the entire vein. Quite often, a combination of all these methods will be used to insure lasting and satisfactory results.

Most physicians these days feel that in severe cases of varicose veins, surgical removal of the veins represents the best hope that the condition will not recut. Several surgical techniques are available, all of them requiring meticulous care with the patient under general anesthesia.

Following the operation, a compression type of dressing is applied to the entire leg from toes to groin. This is done to maintain controlled, supported pressure in the remaining veins, which must now take over the burden of circulating the blood formerly carried by the enlarged, varicose veins.

The patient is encouraged to stand up briefly on the afternoon of the first day. Thereafter, it is important for him to be on his feet about five minutes of each hour for several additional days. Ordinarily, he can leave the hospital—walking on his own feet—in four or five days after surgery.

About a week to 10 days after the operation, the stitches are removed. A period of follow-up observation then is necessary for a considerable time.

Letters to the editor

Dear Sir:

Referring to your article, "Successful Tomato Crops" (on page 9, July FLORIDA GROWER *and* RANCHER, permit me to make the statement that I cannot agree with you on the first sentence:

"Farming is one of the biggest gambles in the world."

If you would have written "*One-crop farming* is one of the biggest gambles in the world" you would be much nearer the truth.

Diversified farming is probably the safest occupation a man can select. But true enough, the one-crop farmer is nothing but a gambler.

Heinrich Perlich
Cassia, Florida

* * *

Gentlemen:

Last September 20th, I sent you a check for $3.30 for a classified ad to sell papaya seed to FLORIDA GROWER *and* RANCHER readers. In checking, I see it was in last November's issue.

Anyway, I only got 5 (five) orders, just about enough to pay for the ad.

But I'm going to try your magazine once again since I think a lot of it. I have been taking it since shortly after you started. I lived then in Akron, Ohio.

Incidentally, one order was from French Morocco and one from Bangkok, Thailand. It seems your paper gets around some!

Harvey K. Rose
Miami, Florida

Grove Heating *(Continued from Page 13)*

heaters will be burning at their full rate by morning.

The types of oil heaters on the market for grove heating have round or square bowls and generally hold nine to 10 gallons of fuel. They are:

Lazy flame, 24 inch and 18 inch stacks; jumbo cone; return stack, and the nine-gallon sliding cover heaters.

High stack and lazy flame heaters are recommended for the northern part of the Florida citrus area and for the colder locations in other sections, or where smoke should be kept to a minimum. The short-stack heater has proved only slightly more efficient than the nine-gallon sliding cover heater.

Although wood is generally burned in open fires, there are some growers who are using wood heaters. However the additional cost of cutting the wood in small enough pieces to be used in heaters increases the cost considerably.

Whatever type of heater is used, the grower should be certain it is made of durable galvanized metal so that it will not rust.

Considerable variation of temperature occurs in almost every grove. These known variations should be taken into consideration when heaters are placed in the grove.

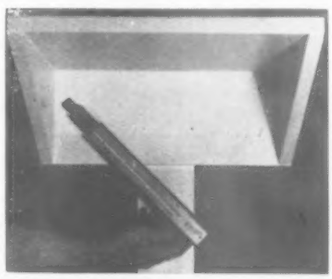
Needed per acre in the cold locations are: from 50 to 60 nine-gallon high stack heaters; 60 to 70 short stack or nine-gallon sliding cover heaters, or 100 piles of wood. For warmer locations, fewer heaters or fires are needed.

The heaters or open wood fires should be placed so as to leave ample driving space one way through the grove for the purpose of refueling, picking, and other grove operations.

An extra row of heaters should be placed along the north and west edge of the heated area since, during periods of cold weather, the wind is generally from the north or the northwest.

Accurate thermometers are as essential for proper grove heating as the steering equipment is in operating a tractor. The minimum recording type has proved to be the most suitable for gauging grove heating operations.

These thermometers should be mounted horizontally and protected



MINIMUM TEMPERATURE grove thermometer, properly sheltered, being reset.

from the sky. A simple mounting may be made by using a 2 x 4 and a couple of boards.

At least two thermometers properly sheltered should be placed north of and far enough away from the grove so they will not be affected by the heaters. These thermometers will be your guide as to what is happening outside the heated area.

Due to elevation, air drainage and other causes, temperatures within the grove, or in any section, will vary considerably. Therefore thermometers should be placed in the pockets, on the slopes of the hills, and on the highest point in the grove.

From experience, one thermometer should be used for every five acres of heated grove.

Special torches are made for use in lighting the heaters or fires in grove heating operations. These torches hold about two gallons of fuel and have a long slender spout, at the end of which is an asbestos wick.

At the base end of the spout (that part which screws into the can), there is a fine screen which keeps the fire from going down into the can and exploding. A mixture of half gasoline and half kerosene is used for fuel.

When lighting the torch, pour some fuel out of the spout, which wets the asbestos wick. The wick is then lighted by a match and a worker carries the torch into the grove.

USE THIS TABLE to determine when heater lighting operations should be begun.

Oranges and Grapefruit	ON A FROST NIGHT FOLLOWING A cold day with slow temp. fall	cold day with rapid temp. fall	warm day with slow temp. fall	warm day with rapid temp. fall
	Air Temperatures °F	°F	°F	°F
Large green fruit	27.5	27.0	27.0	26.0
Half-ripe fruit	27.5	27.0	27.0	26.0
Ripe fruit	27.0	26.5	26.0	25.0

Add 1.5 degree for protecting tangerines, limes and lemons.

LIGHTING TORCH with the safety screen in place.

Fuel types: Oil leads in BTU rating with 19,000 BTU's per pound. Coke is next with 14,000; fat pine wood, third with 9,000.

The figures simply mean that oil produces more heat per unit weight than either coke or wood. This fact is very important, especially when firing is necessary for a relatively long period, because tests have proved that it requires (a) two to three refuelings of coke in a regular coke heater or (b) about 170 pounds of wood on an open fire to equal the fuel content of one nine-gallon oil heater.

Number 2 diesel fuel is recommended for most oil heaters.

It is desirable to have at least three nights' supply on hand. The total supply should be approximately six cords of wood per acre, 10 tons of coke per acre, or 1,500 to 2,000 gallons of oil (540 gallons of this in the heaters) per acre.

Federal - State Frost Warning Service staff members will be glad to assist you with your heating problems.

* * *

"Safety first" does *not* mean hitting the other car before it smacks you!

* * *

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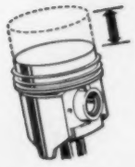
YOU GET MORE OUT OF A FORD

...because there's more in a Ford!

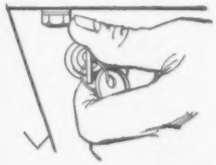


Short-stroke engine — more power with less friction, less wear. Fewer overhauls and repairs. Added fuel economy.

Weatherproof ignition — extra protection from moisture and dust. Easier starting on damp mornings.

Full-flow oil filter — all of the oil is filtered on every trip through the engine. A clean engine runs better, lasts longer.

Quick-acting governor, crankshaft-mounted — eliminates gear drive. Fully lubricated and sealed.



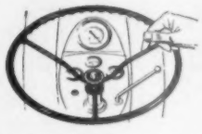
Ignition lock, removable key. An important safety feature around children. Prevents tampering by strangers.

Proof-Meter. Shows travel speed — engine speed — hours worked — recommended PTO and belt pulley speeds. Standard on all except utility models.

Live power take-off. Operates from the regular clutch pedal — no bothersome extra levers. Standard on many models.

Safety starter — engine will not start when tractor is in gear. Prevents accidents.

Vari-Weights. Easy on, easy off front and rear weights let you tailor traction to the job. Only Ford has them! Optional.



Power steering — standard equipment on Ford row crop tractors; available for all Ford tractors.

PLUS

ALL THESE ADVANTAGES!

Choice of gasoline, diesel or LP-gas engines . . . single wheel, dual wheel, wide axle row crop or all purpose designs . . . 2-3 or 4-plow power . . . 4- or 5-speed transmissions. More than 70 matched, quick-attached Ford approved tools.

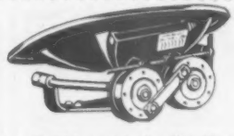
Ford value-priced . . . more power per dollar . . . lower cost repairs. Easy terms, up to three crop years to pay.

YOU GET MORE FOR YOUR MONEY AT YOUR NEARBY FORD TRACTOR DEALER'S!

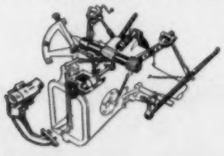
Heavy duty 14-inch brakes. Smooth, sure braking action for sharp turns, quick stops. Handy easy-reach brake locks.

Fuel gauge, oil gauge, generator warning light are standard equipment. Temperature gauge is standard on most models.

Power adjusted wheels. Tractor power quickly and easily spaces the rear wheels for you. Standard on Ford 901 series; optional on others.

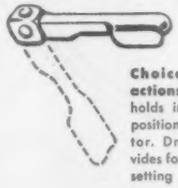


Rest-O-Ride seat. You "float" on a cushion of rubber for a smooth, restful ride. Adjustable to your weight. Standard on some models.

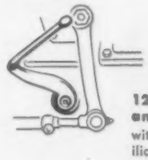


Built-in hydraulic system and 3-point hitch. Proved in more than one million Ford-built tractors. Standard on most models.

Remote control hydraulic accessories. Choice of single- or double-action cylinders. Easily attached or removed.



Choice of hydraulic actions. Position control — holds implement in fixed position in relation to tractor. Draft control — provides for pre-selected draft setting for tillage tools.



12 speeds forward and 3 in reverse with over-under auxiliary drive. Optional equipment for all 4 speed tractors.